 CDC recommends that for the next 8 weeks, organizers cancel or postpone in-person events that consist of 50 people or more throughout the U.S. [More Information on Mass Gatherings](#)

Coronavirus (COVID-19)

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Linda L[llogan@cvm.tamu.edu]; Venkayya, Rajeev[rajeev.venkayya@takeda.com]
To: Richard Hatchett[richard.hatchett@cepi.net]
From: Tom
Sent: Mon 3/16/2020 12:29:52 AM (UTC-04:00)
Subject: Re: Red Dawn Raging Start March 4

No, it expressly excludes them, frustratingly:

CDC guidance as of 3/15/2020

Large events and mass gatherings can contribute to the spread of COVID-19 in the United States via travelers who attend these events and introduce the virus to new communities. Examples of large events and mass gatherings include conferences, festivals, parades, concerts, sporting events, weddings, and other types of assemblies. These events can be planned not only by organizations and communities but also by individuals.

Therefore, CDC, in accordance with its guidance for large events and mass gatherings, recommends that for the next 8 weeks, organizers (whether groups or individuals) cancel or postpone in-person events that consist of 50 people or more throughout the United States.

Events of any size should only be continued if they can be carried out with adherence to guidelines for protecting vulnerable populations, hand hygiene, and social distancing. When feasible, organizers could modify events to be virtual.

This recommendation does not apply to the day to day operation of organizations such as schools, institutes of higher learning, or businesses. This recommendation is made in an attempt to reduce introduction of the virus into new communities and to slow the spread of infection in communities already affected by the virus. This recommendation is not intended to supersede the advice of local public health officials.

-Tom

On Mar 16, 2020, at 12:01 AM, Richard Hatchett <richard.hatchett@cepi.net> wrote:

Does that include schools?

Sent from my iPhone

On 16 Mar 2020, at 00:32, Carter Mecher

wrote:

CDC now recommends that, for the next 8 weeks, events with more than 50 people are canceled throughout the U.S.

<A81F4842CAA4B60AB38AA1790253913.png>

Sent from Mail for Windows 10

From: Dr. Eva K Lee

Sent: Sunday, March 15, 2020 4:46 PM

To: Tom Bossert

Cc: _____ Lawler, James V; Parker Jr, Gerald W; _____ Caneva, Duane; Hanfling, Dan; Gruber, David (DSHS); Dr. Eva Lee; CHRISTOPHER ALLEN; jamison.day@gmail.com; Richard Hatchett; McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON; Dodgen, tDaniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; iwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH); Adams, Jerome (HHS/OASH); Mansoura, Monique K.; Fantinato, Jessica (USDA.GOV); DC; danny.shiau@usuhs.edu; Cordts, Jerome (CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; Kevin Montgomery; Logan, Linda L; LLogandakar; rajeev.venkayya@takeda.com

Subject: Re: Red Dawn Raging Start March 4

Thank you. The total infection and death outside China now surpass those of China's infection and deaths.

<https://newton.isye.gatech.edu/DrLee/>

mobile:

Sent with ProtonMail Secure Email.

----- Original Message -----

On Sunday, March 15, 2020 4:23 PM, Tom Bossert

wrote:

I just posted another piece. Nothing new in it to this team, but it reflects my view of the situation.

<https://abcnews.go.com/Health/coronavirus-paradox-lowest-point-finest-hour-opinion/story?id=69602027>

-Tom

On Mar 14, 2020, at 3:55 PM,

wrote:

Vincent Covello shared Q&As he developed with ASTHO on COVID/

<https://www.astho.org/COVID-19/Q-and-A/>

He uses a technique called message maps. He has a rule 3/9/27--convey 3 points, in 9 seconds, and 27 words. Perfect size for the media.

Might be useful for those of you from state and local public health as well as from healthcare systems.

From: Vincent Covello
Date: Saturday, Mar 14, 2020, 10:14 AM
To: Mecher, Carter <Carter.Mecher@va.gov>
Subject: [EXTERNAL] Follow up: COVID-19 document

Hi Carter,

I have provided below the url for a COVID-19 document that I co-authored and that was published today by ASTHO on their website.

The document contains message maps for questions addressed to US State and Territorial Health Directors. This first batch of 45+ questions came directly last week from the Health Directors.

I co-authored a similar document on ZIKA for ASTHO a few years ago. My understanding is ASTHO received a surge of download requests for the ZIKA document on the first day of publication. Many of the requests came from reporters. They liked the short and long answer format of the message map.

As you might imagine, the contents of the document will be a moving target. The questions and the mapped answers will be updated frequently. For example, we have at least ten new questions based on the events of just the last few days.

Please feel free to share this document with others. I and my team members would also greatly welcome your comments or suggestions.

Best regards,

Vincent

Dr. Vincent Covello
Director
Center for Risk Communication
Tel.: Email:

<https://www.astho.org/COVID-19/Q-and-A/>

From: "Dr. Eva K Lee"
To: James V"
Cc: "Carter Mecher", Gerald W", Duane", "Tom Bossert", Dan", David (DSHS)", "Dr. Eva Lee", "CHRISTOPHER ALLEN", "Richard Hatchett", Eric", Luciana", "Brian Benson", "Tracey McNamara", Ralph S", Carter (VA.GOV)", Richard

(OS/ASPR/EMMO)", THOMAS", "M.D.", "David", "Charity A@CDPH", "Gregory J", William (STATE.GOV)", CAMERON", tDanielt(OS/ASPR/SPPR)", Kristin (OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", "Matthew J CIV USARMY (USA)", "Lisa Koonin", MELISSA", HERBERT", Alexander", MARIEFRED", "jwleduc@utmb.edu", Robert (OS/ASPR/BARDA)", Kevin", Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", David (Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", David", DAVID A", SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", "Ryan Morhard", "Steven Jt(tCHFStDPH)", Jerome (HHS/OASH)", Monique K.", Jessica (USDA.GOV)", "DC", "danny.shiau@usuhs.edu", Jerome (CTR)", Jay J", Joselito", "Will Gaskins", "Kevin Montgomery", Linda L", "LLogandakar", "rajeev.venkayya@takeda.com"

Sent: Saturday March 14 2020 12:44:37PM

Subject: Re: Red Dawn Raging Start March 4

This is so very sad, yes, everything we talked about and everything we have anticipated. Yes, you can see from the curves in the graphs when they have the first confirmed death, they're **at least 2 weeks behind**. I don't understand the screening at the airport, not even a little advice on self-quarantine coming in from any countries. Yes, children will die too if they have no support in the hospitals. There are many with co-existing conditions. Beds are critical. That is all I am counting (when we have one bed, we need everything that goes with it in the support). Healthcare workers and anyone in service to assist this covid-19 operations must stay healthy. But of course we know they will be quarantined at some stage. I know people may think school closure is over-reacting. It isn't if you think about the inter-dependencies. **You can imagine a million different scenarios. Just a simply one** -- a little child got infected from school. He came home and infected his mother who was a nurse. The nurse went to work without any noticeable symptoms, and she infected the ICU patients that she cared for. Ok, this is one case -- and again -- one case is ALL we need to worry about. The cascading effect -- we don't want to even think about.

But as a country, we must fight for everyone and every state. I truly believe and in my calculations, those states that took the pre-emptive steps -- they are going to have the resources to contain their own infection and at some point, can help those states in needs. Here we go about sending patients around -- not 7 -- but many -- when we must lend the help when needed (and if we could do so at all). Now, everyone is fighting their local fire, and it's already quite stressful for everyone. I don't even know if anyone has extra resources. It is really resource-intense. Can you imagine -- India, and the African countries start to pick up? It frightens me. Hence pre-emptive is a must.

<https://newton.isye.gatech.edu/DrLee/>
mobile:

Sent with [ProtonMail](#) Secure Email.

----- Original Message -----

On Saturday, March 14, 2020 10:25 AM, Lawler, James V

From a friend of a med school classmate on Facebook (so caveat as you will)

"MT: So if you're not here in Kirkland Washington, let me give you an update on our not so little town.

Our local hospital, Evergreen, one of the top-ranked hospitals in the country and literally at ground zero in the fight against Coronavirus has run out of beds as of today. The staff is exhausted, demoralized, and supplies are running low.

Because so many staff members are sick, and the operational tempo is so high, medical staff told to be in quarantine due to exposure, but not showing symptoms have been summoned back to work. So far 65 patients have entered the hospital positive for COVID-19, 15 didn't leave alive (as of 3/10).

Tom Douglas, multiple James Beard Award winner is closing down 12 of his 13 restaurants (only leaving one open because of a contract with a hotel) because business is down 90%.

Boeing, which was a hot mess with the 737-MAX issue, to begin with, is now losing more orders than it is getting as the airline industry braces for a 70% reduction in air travel. At the basement of 9/11, global air travel was off 40%.

Norwegian Cruiselines, headquartered in Seattle, has been called out for lying to customers about the safety of their ships, their capacity to protect passengers and making it difficult to cancel or reschedule trips.

Starbucks has announced they will be limited seating in their stores and ones with drive-thru will go drive-thru only.

The Seattle Mariners have moved their home openers out of the area, for now, my guess is the MLB will follow every other sports league and suspend the start of baseball.

Our school district has suspended classes until March 27, but my guess is it will go longer. Issaquah, a town nearby has suspended classes until April 24.

I was in our nearest grocery store, which is a flagship "Fred Meyer" store (Kroger corp) and all of the staples aisles were close to empty. Beans, rice, flour, pasta. Beans about wiped out, the only rice I could find was a 5-pound bag in the Asian section. Only the high-end "boutique" pasta and a few more complex dish pasta like lasagna noodles. The Jewish section had some noodles in it, and the Asian section still had some ramen.

There is no traffic. There is an eerie quiet in the air, and although the videos of people racing in Costco are entertaining, I have not seen anyone running in a store to the TP, fights over food, or other resources. There is this strange calm, but I always remind myself that history has shown we are three hot meals

and a warm bed away from wanting to kill each other.

My wife has shared some other stories from her work - nothing sinister or ominous but nothing I can share and nothing that even if I could, I feel ready to share.

We no longer hear about Life Care Center. The federal government finally showed up there and now all news has stopped. The 70+ employees who are all in various states of being sick are still not tested - that we know. One-third of our town fire department is now in quarantine. If there is anything that gives me the creeps it is this. The government showed up and the news stopped.

When we returned from our trip to Africa on 2/26 and went through Customs in Seattle, there was no screening, no questions, no testing, no sorting of passengers. Nothing. Welcome back, stamp of the passport, done. The lines weren't long and the lack of any form of screening at this Asian gateway was disconcerting. It paled in comparison to the strict protocols we went through in Windhoek and Johannesburg, and the announcements and questions in Frankfurt. What we didn't know at that time is from 2/19 to 2/25, 12 patients had died at Life Care Center for unknown reasons, and the first COVID-19 death was on 2/26.

The response to the threat at a federal level was non-existent.

My opinion.

The Seattle area is about two weeks ahead of most of the United States. For those going this is just hype and this is just the flu, come fly here and see for yourself. I mean flights are cheap and planes are empty. Can even offer you a place to sleep.(no not really, but Kirkland has plenty of hotels)

The Seattle area is probably 2 to 3 weeks behind Iran or Italy at this point. The tidal wave is coming, I believe most in the general public are just in denial about it at this point.

In Italy Coronavirus is killing young and old alike because once you run out of beds, once you run out of breathing machines, Coronavirus becomes an equal opportunity killer. You get pneumonia, your lungs fill up, you basically drown.

When you can get advanced care, your survival odds are very good. Once that system falls apart, it is first come first serve, and how healthy are you. A lot of younger Americans are very unhealthy with multiple comorbidity factors.

Evergreen Hospital ran out of beds today.

Winter is coming."

James Lawler, MD, MPH, FIDSA
Director, International Programs & Innovation
Global Center for Health Security, and
Associate Professor of Medicine

Division of Infectious Diseases
University of Nebraska Medical Center
m:
james.lawler@unmc.edu

<2C4EE4AF32384D10986ED17D25126D99.png>

From: Carter Mecher
Sent: Saturday, March 14, 2020 4:32:54 PM
To: Parker Jr, Gerald W <gparker@cvm.tamu.edu>; Dr. Eva K Lee

Cc: Lawler, James V <james.lawler@unmc.edu>; Caneva, Duane <duane.caneva@hq.dhs.gov>; Tom Bossert
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Gruber, David (DSHS) <David.Gruber@dshs.texas.gov>; Dr. Eva Lee
CHRISTOPHER ALLEN

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<llogan@cvm.tamu.edu>; LLogandakar
rajeev.venkayya@takeda.com
<rajeev.venkayya@takeda.com>
Subject: RE: Red Dawn Raging Start March 4

Non-UNMC email

Is anyone at CDC monitoring ILI?

Here is the latest flu surveillance for Hong Kong, South Korea, US; the states of CA, OR, WA, TX; and the cities of Seattle, NYC, and Chicago (LA hasn't reported week 10 yet).

Why did the US ILI curve deflect up this week, while influenza positive tests are tracing down? Seeing the same wrt ILI increasing in WA, OR, Seattle, Chicago, and NYC. Is this influenza A, COVID, or both? Chicago and NYC are concerning because their influenza virus detection is going down and ILI is going up.

Sent from [Mail \[go.microsoft.com\]](mailto:Mail [go.microsoft.com]) for Windows 10

From: [Carter Mecher](#)
Sent: Saturday, March 14, 2020 7:58 AM
To: [Parker Jr, Gerald W](#); [Dr. Eva K Lee](#); _____
Cc: [Lawler, James V](#); [Caneva, Duane](#); [Tom Bossert](#); [Hanfling, Dan](#); [Gruber, David \(DSHS\)](#); [Dr. Eva Lee](#); [CHRISTOPHER ALLEN](#); [jamison.day@gmail.com](#); [Richard Hatchett](#); [McDonald, Eric](#); [Borio, Luciana](#); [Brian Benson](#); [Tracey McNamara](#); [Baric, Ralph S](#); [Mecher, Carter \(VA.GOV\)](#); [Hunt, Richard \(OS/ASPR/EMMO\)](#); [WILKINSON, THOMAS](#); [M.D.](#); [David](#); [Charity A@CDPH](#); [Gregory J](#); [Walters, William \(STATE.GOV\)](#); [HAMILTON, CAMERON](#); [Dodgen, tDanielt\(OS/ASPR/SPPR\)](#); [DeBord, Kristin \(OS/ASPR/SPPR\)](#); [Phillips, Sally \(OS/ASPR/SPPR\)](#); [Matthew J CIV](#); [USARMY \(USA\)](#); [Lisa Koonin](#); [HARVEY, MELISSA](#); [WOLFE, HERBERT](#); [Eastman, Alexander](#); [EVANS, MARIEFRED](#); [jwleduc@utmb.edu](#); [Johnson, Robert \(OS/ASPR/BARDA\)](#); [Yeskey, Kevin](#); [Disbrow, Gary \(OS/ASPR/BARDA\)](#); [Redd, John](#)

(OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH); Adams, Jerome (HHS/OASH); Mansoura, Monique K.; Fantinato, Jessica (USDA.GOV); DC; danny.shiau@usuhs.edu; Cordts, Jerome (CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; Kevin Montgomery; Logan, Linda L; LLogandakar; rajeev.venkayya@takeda.com

Subject: RE: Red Dawn Raging Start March 4

Most of you have been involved in table top exercises of an outbreak. In those exercises they commonly show a map of the US with the number of cases noted and extent of spread. At various points in the scenario, a facilitator will ask the participants what actions should be taken. I took the graphic of the US map from the NYTimes and created a PowerPoint movie from Mar 4 (the first day that the NYTimes presented that map) through today.

In this scenario, the facilitator pauses now on March 14. At this point the virus has already spread to more than 120 countries. The virus is highly transmissible with an Ro of about 2.5 and has a CFR of 0.5%-1.0%. The elderly and those with chronic medical conditions are at greatest risk.

The response has been hindered by serious delays in the ability to confirm disease with diagnostic testing. This testing capacity is limited. Case ascertainment is limited due to the testing constraints. It is believed that over the next two weeks capacity for testing should improve. However, the demand for testing is anticipated to increase exponentially over the next 2 weeks. A few areas in the US have been particularly hard hit—Washington and California.

The current US case count is 2,654 with 49 deaths. What actions would you take on March 14?

Sent from [Mail \[go.microsoft.com\]](mailto:go.microsoft.com) for Windows 10

From: [Parker Jr, Gerald W](#)

Sent: Saturday, March 14, 2020 12:49 AM

To: [Carter Mecher; Dr. Eva K Lee;](#) _____

Cc: [Lawler, James V; Caneva, Duane; Tom Bossert; Hanfling, Dan; Gruber, David \(DSHS\); Dr. Eva Lee; CHRISTOPHER ALLEN; jamison.day@gmail.com; Richard Hatchett; McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Baric, Ralph S; Mecher, Carter \(VA.GOV\); Hunt, Richard \(OS/ASPR/EMMO\);](#)

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Subject: Re: Red Dawn Raging Start March 4

Carter, thank you for the excellent analysis... I totally agree. I am sure that we will start seeing second guessing because of the politico article and the CDC guidance. I know that I will need to start preparing a response to authorities in Texas and in my university. your analysis is very helpful.

Keep up the good fight!!

Gerry Parker

From: Carter Mecher

Sent: Friday, March 13, 2020 7:13:19 PM

To: Dr. Eva K Lee;

Cc: Lawler, James V; Parker Jr, Gerald W; Caneva, Duane; Tom Bossert; Hanfling, Dan; Gruber,David (DSHS); Dr. Eva Lee; CHRISTOPHER ALLEN;

Richard Hatchett; McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON; Dodgen,tDanielt(OS/ASPR/SPPR); DeBord,Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Wade, David; TARANTINO, DAVID A;

KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH); Adams, Jerome (HHS/OASH); Mansoura, Monique K.; Fantinato, Jessica (USDA.GOV); DC; danny.shiau@usuhs.edu; Cordts, Jerome (CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; Kevin Montgomery; Logan, Linda L; LLogandakar; rajeev.venkayya@takeda.com
Subject: RE: Red Dawn Raging Start March 4

I don't think the intent is to close schools for only 2 weeks. Longer term school closure will be necessary.

What CDC is not accounting for is that we have been flying blind for weeks with essentially no surveillance. This was due to the delays associated with the diagnostic test developed by CDC and the very narrow CDC definition of a PUI that really hampered our ability to even identify community transmission. We have raised this concern repeatedly. Our general sense was that community transmission was already occurring several weeks ago (and we stated so at the time over email and on conference calls), but nobody could prove it because CDC would only perform confirmatory testing on cases meeting the PUI definition. And the PUI criteria by definition excluded any potential case of community transmission. It was very circular. CDC placed state and local public health in a bit of a Catch 22.

So after a long delay we finally have the ability to test more broadly. If you recall, CDC only expanded the PUI incrementally at first to include severely ill patients with no travel hx or link to a known case. It was only later that testing was opened up more broadly. Can a model incorporate that amount of confusion into the initial conditions?

Once testing began in earnest, the numbers of cases exploded. It was like popcorn (also as we predicted). Cases were appearing everywhere. I would challenge anyone to provide an accurate estimate of prevalence in the US. I'd be interested in how certain they would be of that estimate +/-?

The difference between models and real life is that with models we can set the parameters. How would they model what happened in Italy? On Feb 20, they had 3 cases and no deaths. This is what happened since:

Italy			
Date	Cum Deaths	Cum Confirmed	Critical Condition (ICU)
30-Jan	0	2	
31-Jan	0	2	
7-Feb	0	3	
20-Feb	0	3	2
21-Feb	1	20	6
22-Feb	2	63	7
23-Feb	3	155	26
24-Feb	7	229	23
25-Feb	11	322	19
26-Feb	12	453	
27-Feb	17	655	
28-Feb	21	889	64
29-Feb	29	1,128	105
1-Mar	34	1,694	140
2-Mar	52	2,036	166
3-Mar	79	2,502	
4-Mar	107	3,089	295
5-Mar	148	3,858	351
6-Mar	197	4,636	462
7-Mar	233	5,833	567
8-Mar	366	7,375	650
9-Mar	463	9,172	733
10-Mar	631	10,149	877
11-Mar	827	12,264	1,028

12-Mar	1,016	15,113	1,153
13-Mar	1,266	17,660	1,328

The difference between models and real life is that with models we can set the parameters as if they are known. In real life, these parameters are as clear as mud.

To check the accuracy of the model for predicting real life, I would ask that they run Italy for us to show us how well handwashing and isolation would work. How would they model what happened in Italy? On Feb 20, Italy had 3 cases and no deaths. On that day the modelers and the guidance CDC just released would not advise to take any aggressive action. On Feb 21, they had 1 death and 20 cases with 6 patients in the ICU. This is a country of 51 M. What would CDC guidance have advised Italy to do on Feb 21? On Feb 22, Italy had a cumulative total of 2 deaths, 63 cases with 7 patients in the ICU. How would CDC have described what was going on in Italy? Would this meet their definition of widespread community transmission? I doubt it. CDC and the CDC modeler would have recommended sitting tight. Italy responded extremely aggressively. This is what happened since. I think the public health officials and political leaders in Italy acted very quickly and very aggressively—much more quickly and aggressively than what we did when the outbreak began in Seattle two weeks ago. I would ask the modeler and CDC when they would have pulled the trigger in Italy. We have the actual data. The modeler can run his models and can point out what he/she would do and when it should be done. I suspect early on in Italy we would have heard exactly what we are hearing now.

I don't pretend to have perfect knowledge of the extent of disease in the US. There is a lot of uncertainty. But given this uncertainty, isn't the safest approach to close the schools until we know more? We can always reopen the schools. If we delay our response and the outbreak takes off like Italy, we will have made a terrible gamble with the lives of Americans, over what, an extend spring break? Which side of the bet would you take if you were the responsible official (mayor, governor, public health official)?

Again, nobody is advocating a short closure of schools. I don't think it would be prudent to play it cute and try to play chicken with this virus and hold out to the last moment to pull the trigger. It is like thinking you can time the market. You don't do that when thousands of lives potentially hang in the balance. That is what I would tell my mayor, or my governor, or my President.

Sent from [Mail](#) for Windows 10

From: [Dr. Eva K Lee](#)
Sent: Friday, March 13, 2020 7:16 PM
To:
Cc: [Lawler, James V](#); [Parker Jr, Gerald W](#); [Caneva, Duane](#); [Tom Bossert](#); [Hanfling, Dan](#); [Gruber, David](#) (DSHS); [Dr. Eva Lee](#); [CHRISTOPHER ALLEN](#);

jamison.day@gmail.com; Richard Hatchett; McDonald, Eric;
Borio, Luciana; Brian Benson; Tracey McNamara; Baric, Ralph S;
Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO);
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(OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV
USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE,
HERBERT; Eastman, Alexander; EVANS, MARIEFRED;
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(USDA.GOV); DC; danny.shiau@usuhs.edu; Cordts, Jerome
(CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; Kevin
Montgomery; Logan, Linda L; LLogandakar;
rajeev.venkayya@takeda.com

Subject: Re: Red Dawn Raging Start March 4

By the way, Google is funny, part of their work will be re-inventing RealOpt -- the system we have already put in place since 2009 and have continuous development CBRN capabilities and currently have 14,000 public health emergency response users. We have real-life drive-through models (all models have real-life data), dynamic real-time optimal resource allocation engine, optimal locations of facilities, optimal throughput and capacity. We even have pediatric and special needs, and language and socio-economic background etc. There's also the intra-facility disease spread disease models build-in, plus many more.

But I am sure with 1700 engineers, they will have at least 1,700 features. :).

<https://newton.isye.gatech.edu/DrLee/>

mobile:

Sent with [ProtonMail](#) Secure Email.

----- Original Message -----

On Friday, March 13, 2020 6:51 PM,
wrote:

All,

I would question the underlying models being used, it's all in the assumptions, they drive the results. And as to the places that did well without school closures, each caught the epidemic before substantial transmission, this guidance is logically flawed.

Robert Glass

Sent from my iPhone

On Mar 13, 2020, at 4:33 PM,
Lawler, James V
<james.lawler@unmc.edu> wrote:

CDC is really missing the mark here. By the time you have "substantial community transmission" it is too late. It's like ignoring the smoke detector and waiting until your entire house is on fire to call the fire dept. Plus, how are you supposed to know when you have community transmission when they haven't been able to provide a diagnostic assay that can be used widely and at high volume?

**James Lawler, MD, MPH,
FIDSA**

m:

james.lawler@unmc.edu

From: "Parker Jr, Gerald W"
<gparker@cvm.tamu.edu>

Date: Saturday, March 14, 2020
at 1:16 AM

To: "Caneva, Duane"
<duane.caneva@hq.dhs.gov>,
Tom Bossert

Cc:

Dan
Hanfling <DHanfling@iqt.org>,
"Dr. Eva K Lee" <evalee-
"Gruber,David
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"Dr. Eva Lee"

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, Lisa Koonin

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LLogandakar

"rajeev.venkayya@takeda.com"
<rajeev.venkayya@takeda.com>
Subject: Re: Red Dawn Raging
Start March 4

Non-UNMC email

CDC school closure guidance

[https://www.cdc.gov/coronavirus/
2019-
ncov/downloads/considerations-for-
school-closure.pdf](https://www.cdc.gov/coronavirus/2019-ncov/downloads/considerations-for-school-closure.pdf)

From: Caneva, Duane
<duane.caneva@hq.dhs.gov>
Sent: Friday, March 13, 2020 5:08
PM
To: Tom Bossert; Parker Jr,
Gerald W
Cc: cmecher@charter.net;
Hanfling, Dan; Dr. Eva K Lee;
Gruber,David (DSHS); Dr. Eva
Lee; Lawler, James V;
CHRISTOPHER ALLEN;
Richard
Hatchett; McDonald, Eric; Borio,
Luciana; Brian Benson; Tracey
McNamara; Baric, Ralph S;
Mecher, Carter (VA.GOV); Hunt,
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(STATE.GOV); HAMILTON,
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; DeBord,Kristin
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(OS/ASPR/SPPR); Matthew J
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Joseph (OS/ASPR/IO); Wade,
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Scott (OS/ASPR/EMMO); Larry
G; Ryan Morhard; Steven
Jt(tCHFStDPH); Adams, Jerome
(HHS/OASH); Mansoura,
Monique K.; Fantinato, Jessica
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Jerome (CTR); Schnitzer, Jay J;
Ignacio, Joselito; Will Gaskins;
Kevin Montgomery; Logan, Linda
L; LLogandakar;
rajeev.venkayya@takeda.com
Subject: Re: Red Dawn Raging
Start March 4

We should measure it in different
communities and find out.

Get [Outlook for iOS](#)

From: Tom Bossert

Sent: Friday, March 13, 2020
6:07:00 PM

To: Parker Jr, Gerald W
<gparker@cvm.tamu.edu>

Cc:

Hanfling,
Dan <DHanfling@iqt.org>; Dr.
Eva K Lee <evalee-
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rajeev.venkayya@takeda.com
<rajeev.venkayya@takeda.com>
Subject: Re: Red Dawn Raging
Start March 4

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

That article snippet seems misleading. I wonder if the CDC guidance it's based on is equally unclear.

-Tom

On Mar 13, 2020, at 6:04 PM, Parker Jr, Gerald W
<gparker@cvm.tamu.edu> wrote:

Carter and others - article just published in Politico Pro. CDC suggests school closures will not have much impact. There is a discussion of short term versus longer term... Is this misleading? What are your thoughts?

<pastedImage.png>

From:

<cmecher@charter.net>

Sent: Friday, March 13, 2020 4:35 PM

To:

Cc: 'Hanfling, Dan';
'Dr. Eva K Lee';
'Gruber, David (DSHS)'; 'Caneva, Duane'; 'Dr. Eva Lee';
'Lawler, James V';
'CHRISTOPHER ALLEN';

'jamison.day@gmail.com'; 'Tom Bossert';
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'McDonald, Eric';
'Borio, Luciana';
'Brian Benson';
'Tracey McNamara';
'Baric, Ralph S';
'Mecher, Carter
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CAMERON';

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'Phillips, Sally
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'Hassell, David (Chris)
(OS/ASPR/IO)';
'Hamel, Joseph
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'TARANTINO,
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(OS/ASPR/EMMO)';

'Larry G'; 'Ryan
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'Mansoura, Monique
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J'; 'Ignacio, Joselito';
'Will Gaskins'; 'Kevin
Montgomery'; Logan,
Linda L;
'LLogandakar';
'rajeev.venkayya@tak
eda.com'
Subject: RE: Red
Dawn Raging Start
March 4

A cruise ship
passenger in the
Caribbean now

FIRST COVID-19
CASE DIAGNOSED
IN CAYMANS – The
Public Health
Department confirms
that one of the
persons tested
recently for the novel
coronavirus has tested
positive. “The patient
is a visitor who was
transferred from a
cruise ship for a
critical cardiac issue,”
said Medical Health
Officer, Dr. Samuel
Williams-Rodriguez.
Dr. Williams
continued, “The
patient was doing well
but subsequently
developed breathing
difficulties, was
isolated and a test
taken has confirmed is
suffering with the
novel coronavirus.

More countries and

overseas territories
reporting their first
cases:

Gabon

Ghana

Trinidad and Tobago

Kazakhstan

Kosovo

Suriname

Aruba

Guadeloupe

Cayman Islands

Uruguay 4

Venezuela 2

Guatemala 1

Kenya 1

Sudan 1

Ethiopia 1

From:

To: Dan"

Cc: "Dr. Eva K
Lee", David (DSHS)",
Duane", "Dr. Eva
Lee", James V",
"CHRISTOPHER
ALLEN",
"jamison.day@gmail.c
om", "Tom Bossert",
Gerald W", "Richard
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Luciana", "Brian
Benson", "Tracey
McNamara", Ralph
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Jay J", Joselito", "Will
Gaskins", "Kevin
Montgomery", Linda
L", "LLogandakar",
"rajeev.venkayya@tak
eda.com"

Sent: Friday March 13
2020 2:30:49PM
Subject: RE: Red
Dawn Raging Start
March 4

BREAKING: Los

Angeles county in
California announces
the closure of all
schools; this is the 2nd
largest school district
in the U.S. after NYC

From: "Hanfling,
Dan"
To: "Dr. Eva K Lee",
"Carter Mecher"
Cc: David (DSHS),
Duane", "Dr. Eva
Lee", James V",
"CHRISTOPHER
ALLEN",
"jamison.day@gmail.c
om", "Tom Bossert",
Gerald W", "Richard
Hatchett", Eric",
Luciana", "Brian
Benson", "Tracey
McNamara", Ralph
S", Carter
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Joseph
(OS/ASPR/IO)",
David", DAVID A",
SANGEETA", Scott
(OS/ASPR/EMMO)",
"Larry G", "Ryan
Morhard", "Steven
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du", Jerome (CTR)",
Jay J", Joselito", "Will
Gaskins", "Kevin
Montgomery", Linda
L", "LLogandakar",
"rajeev.venkayya@tak
eda.com"

Sent: Friday March 13
2020 2:15:35PM
Subject: RE: Red
Dawn Raging Start
March 4

Continuing to work
this angle – but it is
awfully hard to build
the car while we are
speeding down the
highway – that
notwithstanding, we
are making
incremental progress
here.

[https://www.washingt
onpost.com/opinions/
2020/03/13/your-
smart-phone-could-be-
essential-fight-against-
coronavirus/](https://www.washingtonpost.com/opinions/2020/03/13/your-smart-phone-could-be-essential-fight-against-coronavirus/)

Dan Hanfling, MD

From: Dr. Eva K Lee
<evalee-

Sent: Friday, March

13, 2020 2:12 PM
To: Carter Mecher
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@hq.dhs.gov>;
Eastman, Alexander
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>; 'Johnson, Robert
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s.gov>; Yeskey,
Kevin

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<John.Redd@hhs.gov>; 'Hassell, David (Chris) (OS/ASPR/IO)'
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<kevin@collaborate.org>; 'Logan, Linda L'
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<llogandakar@gmail.com>;
'rajeev.venkayya@takeda.com'
<rajeev.venkayya@takeda.com>
Subject: RE: Red
Dawn Raging Start
March 4

Yes, virtual care is a must. This will supplement those who are coming in require direct interaction.

Virtual care is needed for at least 4 reasons.

1. To help alleviate the surge of patient requests
2. To allow healthcare workers who are self-quarantine to be able to continue their care for other patients.

We want all the healthcare workers to be healthy. But if they're exposed to positive cases without knowing and have to

be quarantine, can be due to exposure from family members or patients, then they are out. Their knowledge and expertise is critical and hence they need to use the tele-health capability to tend to patients.

3. Regular medical needs will be sidelined (as we can see in Italy, basically all scrapped). So we need to expand tele-health to those patients who need to be taken care of (outside covid-19). It is unclear if it is wise for them to walk into the clinic, so they can choose tele-health to get consult and advice.

4. School children may need medical care. Some of them may get healthcare check at school. Now school is out and we need to think about tele-health or mobile clinic.

evalee-

<https://newton.isye.gatech.edu/DrLee/>

mobile:

----- Original
Message -----

On Friday, March 13,
2020 1:34 PM, Carter
Mecher

<cmecher@charter.net
t> wrote:

David
you make
a valid
point. As
the
epidemic
increases
in
intensity,
the
hospital
capacity
(defined
by
staffing)
decreases
as more
staff
become
ill
(followin
g the epi
curve)
and the
actions
we take
to slow
the
outbreak
potentiall
y add to
the
absenteei
sm. One
thing to
think
about is
how to
effectivel
y
leverage
HCWs
who
might be

home for
quarantine
or who
might be
mildly ill
and
isolated
at home
or home
with
children
because
schools
are
closed.
Bad
combination
of a
surge in
patients
and short-
staffed.

In
another
conversation
we
are
having,
we need
to very
quickly
pivot to
virtual
care in
the
outpatient
setting.
It
redefines
what
outpatient
capacity
even is.

Sent from
[Mail](#) for
Windows
10

From:

Dr. Eva
K Lee

Sent:

Friday,
March
13, 2020
12:58 PM

To:

Gruber,D
avid
(DSHS)

Cc:

Caneva,
Duane;
cmecher
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net; 'Dr.
Eva Lee';
'Lawler,
James V';
'CHRIST
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ALLEN';
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.com';
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Bossert';
'Parker
Jr, Gerald
W';
'Richard
Hatchett';
'McDonal
d, Eric';
'Borio,
Luciana';
'Brian
Benson';
'Tracey
McNama
ra'; 'Baric,
Ralph S';
'Mecher,
Carter
(VA.GO
V);
'Hunt,
Richard
(OS/ASP
R/EMM
O);
WILKIN

SON,
THOMA
S; 'M.D.';
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SPPR)';
'DeBord,
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; 'Phillips,
Sally
(OS/ASP
R/SPPR)'
;
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J CIV
USARM
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(USA)';
'Lisa
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Yeskey,
Kevin;
'Disbrow,
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(OS/ASP
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A)';
'Redd,
John
(OS/ASP
R/SPPR)'
; 'Hassell,
David
(Chris)
(OS/ASP
R/IO)';
'Hamel,
Joseph
(OS/ASP
R/IO)';
'Hanfling,
Dan';
Wade,
David;
TARAN
TINO,
DAVID
A;
KAUSHI
K,
SANGEE
TA; 'Lee,
Scott
(OS/ASP
R/EMM
O)';
'Larry G';
'Ryan
Morhard';
'Steven
Jt(tCHFS
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'Adams,
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'Fantinato

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m'

Subject:
Re: Red
Dawn
Raging
Start
March 4

Dave,
yes,
hospital
resources
need to
be
considered
and
analyzed
and
optimized
for the
best
outcome.
I have
incorporated
some
hospital

resources
in the
model but
have not
plotted
the
results
out for
circulation. I will
start
doing
that later
today. I
can't
draw a
graph (by
hand) like
all of you.
I am used
to
running
the whole
event and
see what's
happening. It is
easier for
me that
way.

1. rapid
testing, 2.
timely
implementation of
NPI 3.
Optimize
and
strategic
hospital
surge

all of
them are
inter-
depending
in a
system
network
view, not
linear.
And

clearly
along
these 3
there are
many
branches
of (inter)
dependencies
coming
out that
need our
attentions
.

I will be
doing a
drive-
through
screening
in
DeKalb
with the
local
leaders.
Let's
hope we
get the
test kits
and the
PPE.
Does not
seem like
there's
enough of
anything..
.. the
logistics
chain
there is
very
slow.

evalee-
gatech@

.

https://ne
wton.isye
.gatech.e
du/DrLee
/

mobile:
404-432-
6835

Sent with
[ProtonMail](#)
Secure
Email.

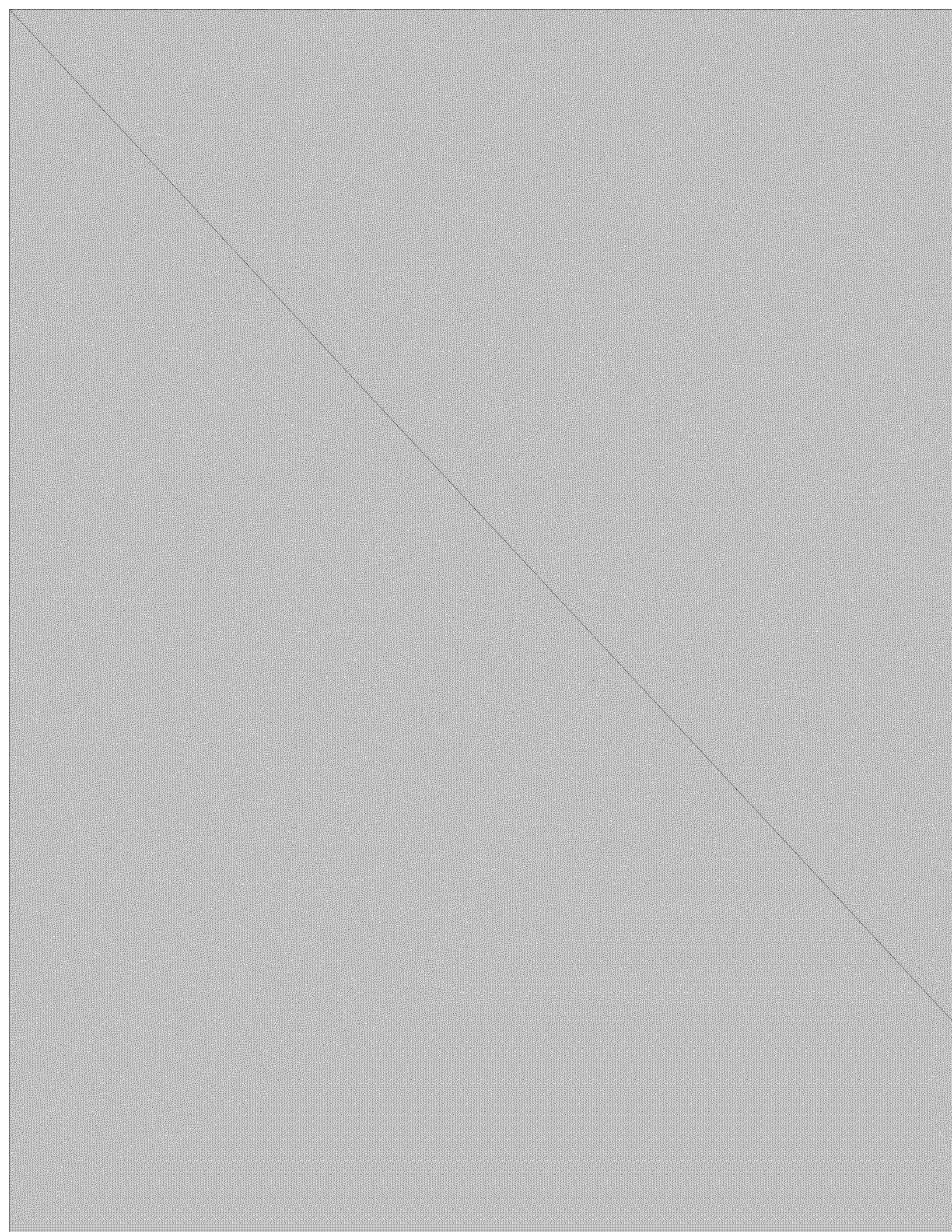
Original
Message

On
Friday,
March
13, 2020
12:34
PM,
Gruber, David
(DSHS)
<David.Gruber@dshs.texas.gov>
wrote:

Much attention is to the graphic showing the impact of flattening the epi-curve on hospitals/healthcare. While I think it gets the point across I also think it is a bit misleading in that the line depicting healthcare capacity is flat.

During this outbreak, the hospital capacity line will drop significantly with an influx in patients even with NPIs and only come back up after modification of processes, reduction in cases or increases in resources are added.

I feel with so much visibility is on testing and NPIs, the focus on hospital and healthcare capacity is lost in the news cycle. Have drawn graphics below that show what's currently in the news and what should be presented (or at least used for public health and health planning.)



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 (OS/ASPR/BARDA)' <Robert.Johnson@hhs.gov>; Yeskey,
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 John (OS/ASPR/SPPR)' <John.Redd@hhs.gov>; 'Hassell,
 David (Chris) (OS/ASPR/IO)' <David.Hassell@hhs.gov>;
 'Hamel, Joseph (OS/ASPR/IO)' <Joseph.Hamel@hhs.gov>;
 'Hanfling, Dan' <DHanfling@iqi.org>; Wade, David
 <david.wade@hq.dhs.gov>; TARANTINO, DAVID A
 <david.a.tarantino@cbp.dhs.gov>; KAUSHIK, SANGEETA
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 <steven.stack@ky.gov>; 'Adams, Jerome (HHS/OASH)'
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Subject: RE: Red Dawn Raging Start March 4

The Healthcare Sector private/ public partners need to organize in a national health reliability organization structure unhindered by government bureaucracy.

Change my mind.

NHRO fiddled while Rome burned...

Hurricane Irma was one of the costliest hurricanes in U.S. history at nearly \$50 Billion in damages. It hit the Florida Keys heading north on September 10, 2017, heading up Florida's western coast, leaving Florida as a Tropical Storm and entering Georgia on September 11. In preparation for the storm, the Energy Sector pre-staged response resources near the state but outside the projected path of the storm. Governor Rick Scott quickly declared a state of emergency authorizing Energy Sector workers from outside of Florida

to support response operations, and within 3 days of Irma leaving Florida, over 60,000 Linesman technicians from 48 states and Canada entered Florida to repair the damaged power lines and restore electricity to about 6.5 million customers who had lost power. All were licensed professionals under the management of the private sector coordinating with Florida and FEMA for the hurricane response. Their wages were paid by Florida Power and Lights Company, those costs covered by a hurricane insurance policy paid for by its customers as part of their rates.

The National Disaster Medical System used up the last of its 4000 responders' deployment time. They were completely tapped out.

II. Why a National Health Reliability Organization (NHRO)? The House of Medicine and the Need for Standards Development Processes

We can look to the Energy Sector for instructive solutions driving reliability that may apply to the Health Sector. The Federal Power Act (FPA) of 2005 derived the authorities for the Federal Energy Reliability Commission (FERC) to have oversight of an Electric Reliability Organization (ERO), ultimately the National Electric Reliability Corporation (NERC), in its responsibilities to develop and enforce mandatory “reliability standards”. These standards impose requirements on users, owners, and operators of the bulk power system to ensure reliability of the power grid. Over \$1 Trillion in infrastructure owned and operated by over 3,500 utility organizations provides electricity to over 334 million customers.

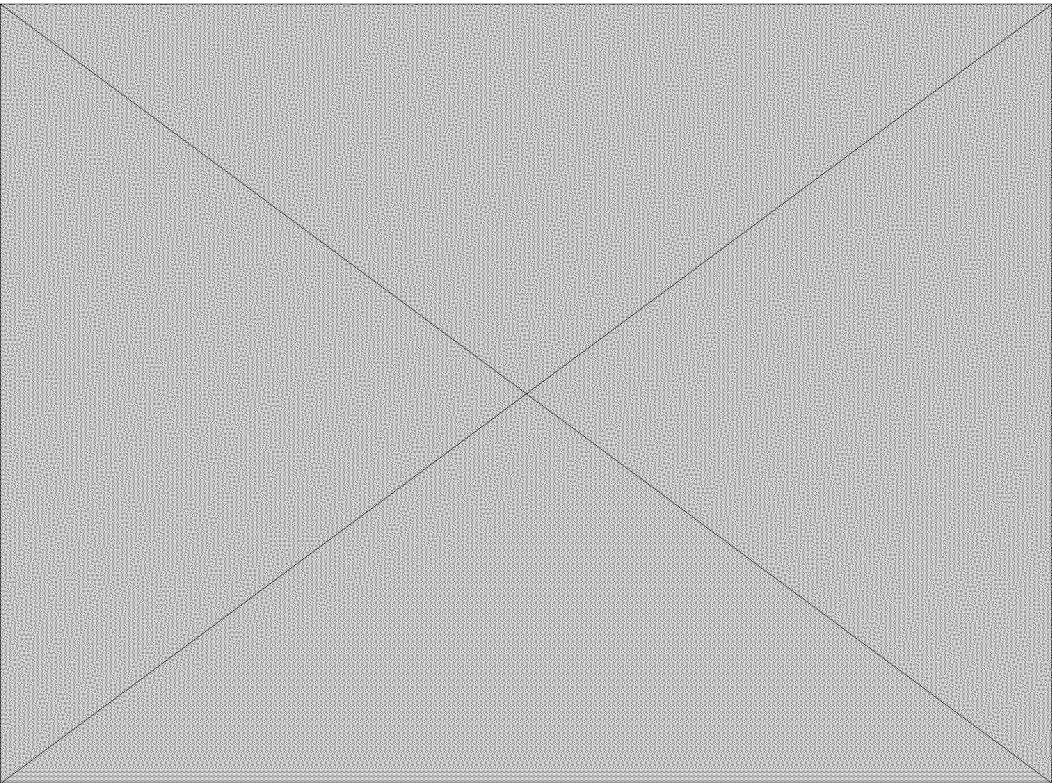
The Energy Sector had its watershed moment with the Great Northeast Blackout of 1965 when a faulty setting of a protective relay on a high voltage transmission line in Ontario, Canada, failed. Over 30 million customers in the Northeast were without power for nearly 13 hours. In response to the blackout, voluntary reliability councils were established to investigate the causes and develop measures to reduce the likelihood of such events recurring. The NERC was established to provide a means for coordinating among interconnected utilities to ensure that the transmission network in the U.S. was reliable, adequate, and secure. In 1981, as the grid expanded to include sections of Canada and Mexico, the NERC changed from the *National* to the *North American* Electric Reliability Corporation with the same NERC acronym. On August 14, 2003, North America

experienced its largest power blackout affecting 50 million customers extending across the Northeast into the Midwest. The cause was linked to “the 3 T’s” of power outages—trees, tools, and (lack of) training. As a result, Congress added Section 215 to the Federal Powers Act of 2005 that authorized the development of mandatory Reliability Standards by an independent electric reliability organization. This mandatory approach replaced the industry’s voluntary protocols and guidelines for operating and planning the bulk power system that had been in place since the 1960’s. While the NERC only covers bulk power generation and transmission, the regional councils broadened the membership to include all segments of the electric industry bulk power supply.

While NERC reliability standards do not cover the local, lowered voltage distribution of electricity--the power lines most often affected from storms--the industry as a whole has extended the reliability culture to the end customer through the NERC governance process that includes public stakeholders (i.e., customers) in the review of nearly all standards. Many corporations operate in bulk generation, transmission, *and* distribution, so are incentivized to “keep the lights on”. Within the industry, “coopetition” thrives because of the interdependencies, and the need for mutual aid and assistance that is frequently needed. And, at the end of the day, the industry is required to be reliable—keep the power on, and keep it affordable.

In the Health Sector, the same risks of cascading effects exist in the form of public health emergencies. The Sector is decentralized with limited, traditional, ineffective standards development processes and a splintered organizational structure. Associations, academies, and societies are formed by medical guilds to ensure specialty voices are heard; however, very little signal rises above the noise unless done so through adversity, crisis, or sensationalism. Contagious diseases, poorly established practices, defective devices, or dangerous treatments can impact the end customers, but the Sector lacks the infrastructure or mechanisms to measure and recognize adverse outcomes rapidly and effectively. The private sector is essentially disconnected from government coordination except through limited, tenuous paths, including licensing at the state level, and reimbursement rates by the Center for Medicare and Medicaid Services (CMS) driving standards and pricing. The “House of Medicine”, \$3.5 Trillion of annual economic activity in the U.S., is not merely a house divided, it is a house in splinters. So, what would a “Health Reliability Organization” look like in our health sector?

Figure 1. A National Health Reliability Organization (NRHO) for the House of Medicine, \$ 3.5T of economic activity.



This ICE is Cool...

Amir Patel is a patient recovering from 4 vessel coronary artery bypass graft (CABG) surgery in a small, private hospital in Calcutta, India. Under the watchful eyes of his intensive care unit nurses, he has no less than 12 medical devices monitoring or treating his condition, including a pulsox to monitor his oxygen levels, an end-tidal CO2 monitor, an ECG monitoring his heart rate and tracing, several IV infusion pumps giving him IV fluids and medicines, and a blood pressure cuff cycling every 10 minutes to measure his blood pressure. Each device operates independently from the other with alarms programmed to trigger should that device detect some abnormal level of function. All of the data from these devices is being captured and recorded in an Integrated Clinical Environment (ICE) device—an “ICE Box”. It is a large amount of data that, under normal circumstances will never make it to Amir’s electronic health record. But today, unfortunately, this will not be a normal outcome. One of Amir’s graft sutures to a vessel supplying blood to his heart has failed, and the vessel is leaking. Though several of the devices are registering significant, detectable changes consistent with this blood loss and the loss of blood supply to his heart, none are reaching a threshold level to alarm. By the time one of them alarms, and the nurse responds, and the surgeon is consulted, and they investigate and identify the cause of the alarm, Amir has lost too much blood to his heart and suffers a fatal cardiac arrest. While this is a known complication and risk of these surgeries, his surgeon

is not satisfied.

This surgeon, a renowned cardiac surgeon who practiced in the United States for decades before “retiring” and opening this specialty hospital in India, provides these surgeries to patients for a flat fee of \$ 600. The patients would otherwise have no hope of affording it elsewhere. His hospital is extremely efficient, utilizing a systems operations engineered approach to optimize the process. He is also working with a research project from the U.S. to integrate the data from the multiple medical devices into the ICE Box. On analyzing the output from Amir’s case, he is able to identify a pattern of changes captured by several of the medical devices that demonstrated a predictable pattern expected with this type of complication. This pattern begins to emerge nearly 30 minutes before any single device alarms, and it is fairly specific for the injury type. Applying this pattern to all the patients in his care, he now has a more sensitive indicator for an adverse outcome that is also specific to the type of complication that is occurring. It can be applied as an “algorithm” looking across the entire enterprise to identify complications earlier to the benefit of all patients being monitored and improving the quality of care. It is likely additional devices could add sensitivity or specificity to the predictive strength. It’s also likely there are patterns that identify other complications, that they can be further refined for sensitivity and specificity— cool, always improving apps for the ICE Box.

But where do these algorithms or apps get submitted? How are they validated? Who controls the “library” or registry for other such algorithm? Is this intellectual property? Is there a marketplace for these discoveries? Who controls what goes on the shelves in the ICE Box?

III. National Health Reliability Organization Systems Architecture

The rate of technology advancements across the various sectors of society continues its exponential climb. The balance between regulatory oversight and free, unfettered development and innovation must be managed through a deliberate, intentional, systematic process. Public-private partnerships play a role, as do development of consensus based industry standards. Title XII of Energy Policy Act of 2005 added Section 215 to the Federal Powers Act that authorized the Federal Energy Regulatory Commission (FERC) to certify an independent electric reliability organization to develop and enforce mandatory Reliability Standards. This empowered the private sector to self-enforce compliance of its industry standards. If and how this could be applied in the Health Sector requires much further, careful consideration. It requires the collection of data to

analyze and validate outcomes. It introduces new drivers for the sector that seek to optimize operations, improve efficiency, and incorporate improvements system wide that are evidence-based. It requires new tools and disciplines to find these efficiencies, identify risk, improving quality while reducing costs.

A. Basic Organizing Principles Applied to the National Healthcare Reliability Organization (NHRO)

Guiding Principles (Harvard Leadership Course)

- Unity of Effort
- Generosity of spirit and action
- Stay in one's lane and assist others to succeed in theirs
- No ego, no blame
- A foundation of trusting relationships

Structural Principles

- **Map the Systems Architecture Out:** Enterprise Architecture with Agile Taxonomy (Folksonomy) and Ontology that captures the Engineered, Systems of Systems of the sector
- **Determine the Business Rules:** Business Process Management with structured Rules of Engagement
- **Use a Common Enterprise Knowledge Management System:** Keep data authoritative and relational, Web 2.0, 3.0 enabled.
- **Measure the Performance:** Outcomes, Cost, Efficiency, Effectiveness, Risk Analysis, Process Improvement, Learning

B. National Health Regulatory Oversight and Governance (NHROG)

- The NHROG authority would be empowered under a National Healthcare Reliability Act
- Would focus primarily on *oversight* of the development,

implementation, enforcement, and validation processes of "healthcare reliability standards" developed by the National Health Reliability Organization (NHRO).

- Ensure the stakeholders in the Health Sector fulfill their responsibilities in providing reliability of the Health Sector—quality, affordability, and accessibility.
- Health reliability standards impose requirements on stakeholders in the Health Sector that address beyond day to day "blue sky" operations to include preparedness for and response to “black sky days”—risks identified through Health Sector threat and hazard identification risk assessments (THIRA) and individual hazard and vulnerability assessments at the local, state, and regional level.

C. Proposed Federal Executive Oversight Council

Staffs of these offices support process, projects, and proposals. If the commission lacks sufficient regulatory power, the HHS components would need to be considered to be given additional regulatory oversight investigation, and auditing authorities to ensure that industries and organizations do not pose threats to public safety or well-being.

- White House: National Economic Council (1), Domestic Policy Council (1), National Security Council (1)
- HHS (9): ASPR, ASH, FDA, NIH, NIAID, CDC, CMS, SG, ONCHIE
- DOD (2): ASDHA, TMA
- VHA
- DHS: CMO
- USDA
- DOC (NIST)
- DOJ
- State (MED)
- Ad hoc participants: National Center for Medical Intelligence (NCMI), DOJ/ FBI, DOL (OSHA), EPA, ODNI, NCTC, DOD Branch Surgeons General, Regional Combatant Commanders Command Surgeons
- **State/ Tribal/ Territorial Health Regulatory Oversight Authorities**
 - State Public Health organizations and agencies
 - Quarantine

- Professional licensing and monitoring authorities
- Emergency waiver process during disasters
- EMACs
- Prescription Monitoring
- Biohazardous Waste Handling and Transport
- EMS Systems
- County and City Health Departments

D. National Health Reliability Organization (NHRO):

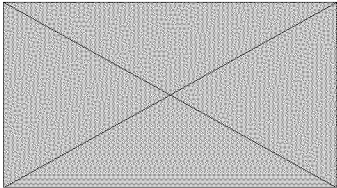
- Mission: Ensure the reliability of healthcare sector to the American public with the triple aim of quality, affordability, and accessibility. This includes during response to predictable disasters.
- Vision: A national healthcare sector that unleashes the innovation and compassion of the American people working in the free-market economy to provide reliable healthcare to the nation.
- Purpose: Provide the Healthcare sector a structure for self-governance to provide reliability--quality healthcare that is affordable and accessible. The NHRO is answerable to oversight for standards development, implementation, compliance, and validation.
- Goals:
 - Ensure a reliable, resilient Health Sector able to meet the healthcare needs of the nation even under extreme conditions or circumstances
 - Drive innovation in healthcare to reduce costs, gain efficiencies, and improve individual and national health and wellness,
 - Recruit the next generation of researchers and healthcare providers that continue to innovate and provide compassionate, reliable healthcare.
- Includes Private Sector Organizations, Associations in membership
- **The Regional Disaster Healthcare Response System (RDHRS)** is the preparedness model of the nation's Healthcare System: Hospital or cluster of hospitals covering a defined catchment area that is integrated with community level critical sector partners including public works, public safety, energy, transportation, logistics, and all of the Medicare and Medicaid Participating Providers and

Suppliers

- Example from the Energy Sector: "North American Electric Reliability Corporation (NERC)"

NHRO Lead Council

- Chairman elected by Member Voters
- Executive Committee composed of NHRO Committee.



- Answers to the NHROG
- Reports to the Administration, Congress, Members, Customers
- Coordinates with Health Sector Coordinating Council (SCC)/ Government Coordinating Council (GCC)
- Administrative Support Staff (n=100's)
- Chartered with corporate governance processes, most work and output is done virtually.
- Public and External (inter-sector) Affairs

Admin Support Staff and the Gateway

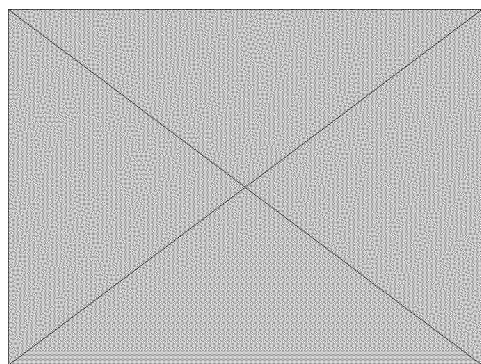
- Gateway into the NHRO Environment
- Administrative support staff (n=100's) connected via the Portal Enterprise who manage the activities behind the scenes
- Help Desk for issues, topics, projects
- Virtual Emergency Operations Center, Incident management capability
- Information Sharing Analysis Center (ISAC)

Members (Partners?)

- Any organization engaged in meaningful aspects of healthcare or public health in the United States
 - Obligation to keep healthcare reliable–affordable, accessible, of good quality
 - Based on Mission, Purpose, Objectives, Activities

- Associations, Organizations, Professional Societies, Corporations, Hospitals
- All Members are characterized and "tagged" with specific traits for matching to "Alliances": Committees, Subcommittees, issues and projects
 - Functional Mission and Purpose
 - THIRA Risks
 - The 10 Dimensions of National and Homeland Security Framework
 - Financial (e.g., revenues, Profit/ non-profit)

Voters (Members?)



- Voters are members or employees of the Associations, Organizations, Hospitals, Corporations
- Voters retain one vote for each organization that they participate in that is a member of the NHRC.
- For hospitals and CMS Participating Providers and Suppliers, this includes staff members that are credentialed and privileged
- Note that many federal workers are voters through their professional associations
- Excludes unions

Committees and Subcommittees

Committees mirror the oversight within the Federal departments and agencies for ONE Health and the components contributing to healthcare and public health.

- They further define oversight to streamline process, clarify roles, responsibilities, and authorities, and facilitate coordination across the sector and public private partnership

(FHRC/ NHRC)

- Chairman of Committees sit on the NHRC Executive Committee
- Sub-committees may be formed to account for greater specificity of effort.
- Alliances, issues, and projects may work across committees and sub-committees
- Committees/ sub-committees may want to include separate but linked issues/ projects that are closely related but look for different outcomes through the Forum.
- Committees are topic based and address issues that are interdependent. They use a matrixed approach to work issues and projects.
 - Healthcare Coalitions and Systems
 - Outcomes, Performance, and Learning
 - Biosafety and Ethics
 - Workforce
 - Education, Training, Certifications
 - Recruitment, Suitability, Career Progression
 - Professional Ethics Compliance
 - Implementation
 - Compliance and Enforcement
 - Global Health Security
 - Food Safety and Security
 - Drug Safety, Security, and Utilization
 - Science and Technology Advancement
 - Artificial Intelligence (AI) and Patient Interface
 - Diagnostics
 - Therapeutics
 - Advanced Vaccine Development
 - Healthcare Economics
 - Biodefense and National Security
 - Preparedness and Response to All Hazards

- Health Information Technology and Data Exchanges

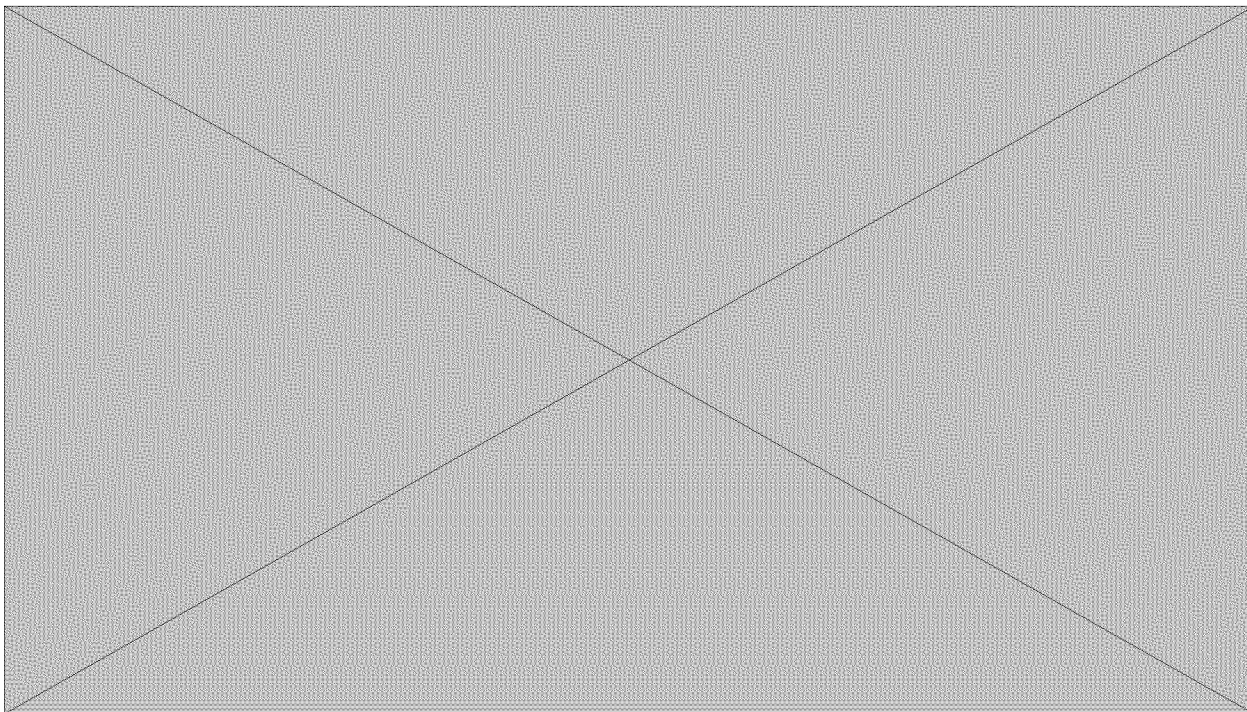


Figure 2. Standards Setting Organization Function for the National Health Reliability Organization (NHRO)

E. Standards Development Process, Alliances, and Working Groups

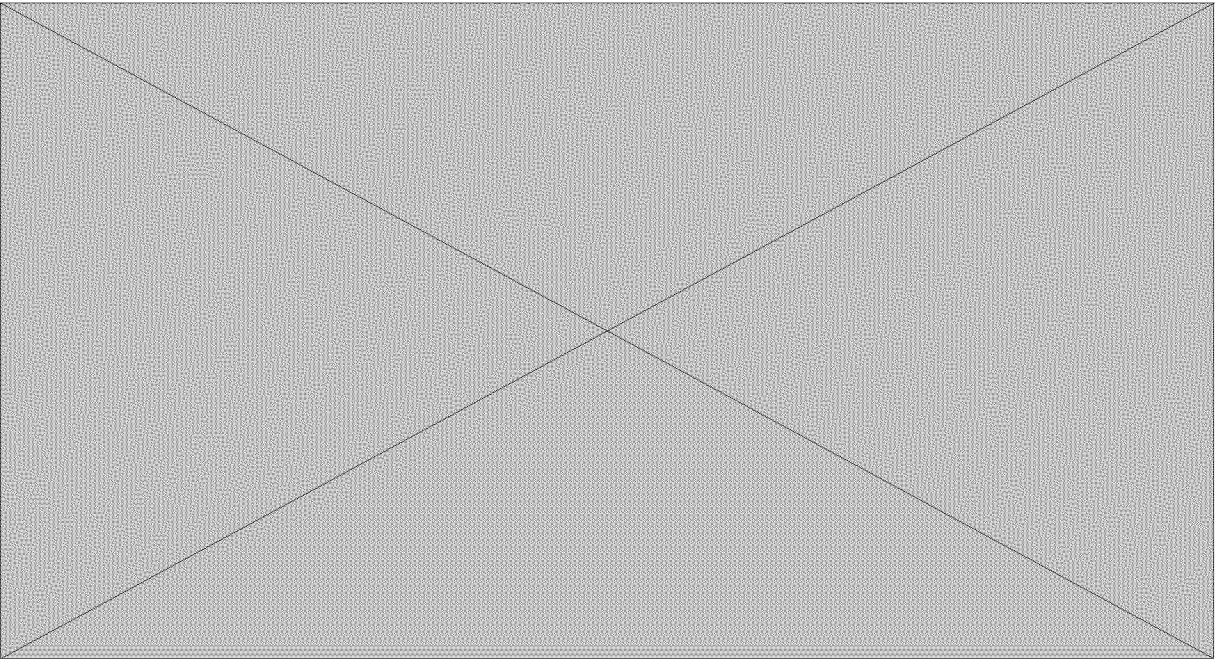
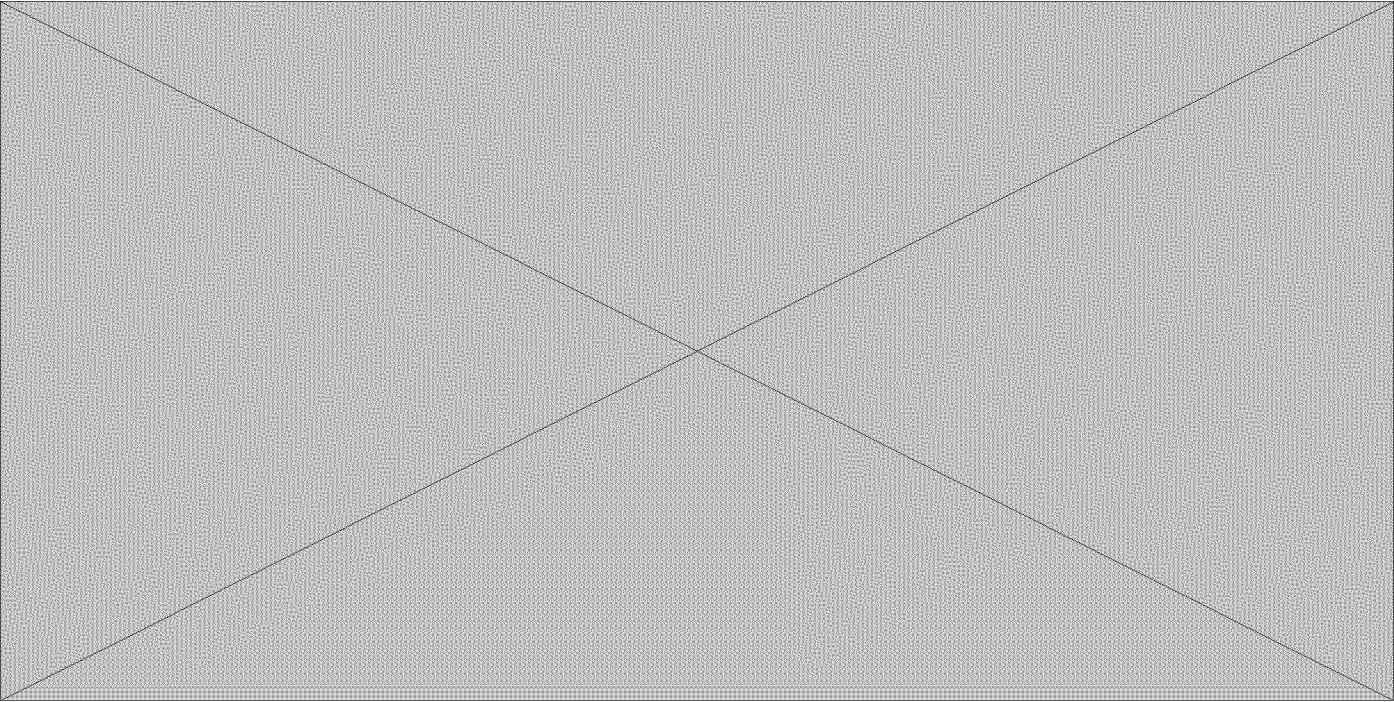
Alliances are determined by Issues or Projects, using members' characterizations to identify who should participate.

- Requires a very detailed taxonomy and ontology of the healthcare system
- Relevance determines "mandatory" participants and "ad hoc".
- Measurements and weighting factors identify significance of elements and their links and attachments to other elements to identify relevance for prioritization of attention and action level
- Thresholds identify triggers and warning signaling or flags for attention to issues identified
- Weighting factors employ fuzzy logic to capture various factors impacting relevance
- Comprehensive [PowerPoint Presentation](#)
- Relationships

- The system uses algorithms and smart humans using search to seek out common functions, objectives, activities, tasks, roles, responsibilities, authorities that indicate synergies that should be matched, aligned, collaborative, or may offer ready-made solutions.
- "[Match.gov](#)"-like capability
- Seeks to avoid redundant work, leverage good work already done, allow for crowd-sourcing issues for solutions.
- Breaks through silos.
- Interoperability, Dependency, Interdependency, Collaboration, Coordination
- Personal relationships are promoted via gamification and use of avatars highlighting characteristics of users and leveraging the diversity of skill sets, talents, and experience, and characteristics
- Build great teams that express the diversity of personalities in the dramedy of the workplace
- Mandatory participants are those with "skin in the game", primary expertise or operational relevance to the issue (including secondary relevance).
- Operational Filters: Need to find all those with primary, secondary, tertiary interdependencies to consider the solutions
- The systems are complex, non-linear, and dynamic over time
- Solutions must be crowd-sourced (not group-think) to find single points of failure
- The NHRC must measure outcomes across all healthcare coalitions to pick up indicators and warnings of failure points
- Operational mandates: The sector must account for beyond the daily routine missions and be able to conduct operational response that is unified with FSLTT government efforts.
- Solutions may also need to be customized to account for variables specific to or that have greater impact on different parts of the system.
- For example, power outage requirements for air-conditioning in hospitals or nursing homes in the South during summer or heat in the North during winter.

Figure 3. diagram displays the process for developing topical committees, multi-disciplinary representation,

and standards development structure.



F

Figure 4 displays the sub-components of main topics, broken down further to critical sub-topics

F. Health Information Data Exchanges

Health Information Data Exchanges (HIDE) represent a new, emergent sub-sector

- A cottage industry allowing for secure, private sharing of data and information to optimize the healthcare provided nationwide
- Data has intrinsic and extrinsic value. Big data has big

value. Trash or treasure, who can use the data?

- Data sharing/ brokerages in support of the NHRC.
- Another analogous system is the National Weather Service--billions of dollars invested in weather stations, satellite systems, and computational science now allows very accurate characterization, forecasting, and prediction of local weather patterns and national impact.
- Internet of Things (IoT) will collect data. The integration of data layers will need to be explored to find meaningful information (improving quality, decreasing cost, increasing access to healthcare).
- Should be a part of the publication of medical journals consolidated into libraries (see "The Academy" below).
- Actuarial versus statistical data outcomes that include additional data layers (demographics, geo-spatial locations, time, geography...)
- Algorithms for search, treatment, research, surveillance,
- Registries (virtual and active) for disease processes, treatments, etc..

G. The Forum

The Forum captures the business process "Rules of the Road" for addressing issues and projects using PNP Project Management Principles

- Wiki collaboration capturing authoritative, relational data in netcentric operations style with smart push, pull
- Provides situational awareness and is transparent to the public
- Has an associated healthcare information/ data exchange for capturing and measuring outcomes
- Issues/ Projects can be specific to national, regional, state, county, community, healthcare coalition
- Captures progression of projects/ issues through 8 phases
 - Deconstruction: Identifying the issue in detail to irreducible complexity including manpower, organizational structure, requirements, equipment, training, exercises, assessments, maintenance (annual costs), sustainment (outyear costs)

It should all use a standard format that forces the details to be determined up front. This makes assessment and outcome metrics determination easier (or possible) later on.

- Assimilation: identifying relevant members to form the sub-committee (alliance) and bring them together to work the issue/ project
- Construction:
- Adjudication
- Implementation
- Assessment
- Analysis
- Outcomes Reporting and Standards Development
- Output is a "Standard", "Practice", or appropriately titled solution that is presented back to the appropriate subcommittee/ committee for review and approval, then sent to the appropriate regulatory entity for review.
- Compliance: Ensures objectives of the project are being met and are aligned with Healthcare Reliability Standards

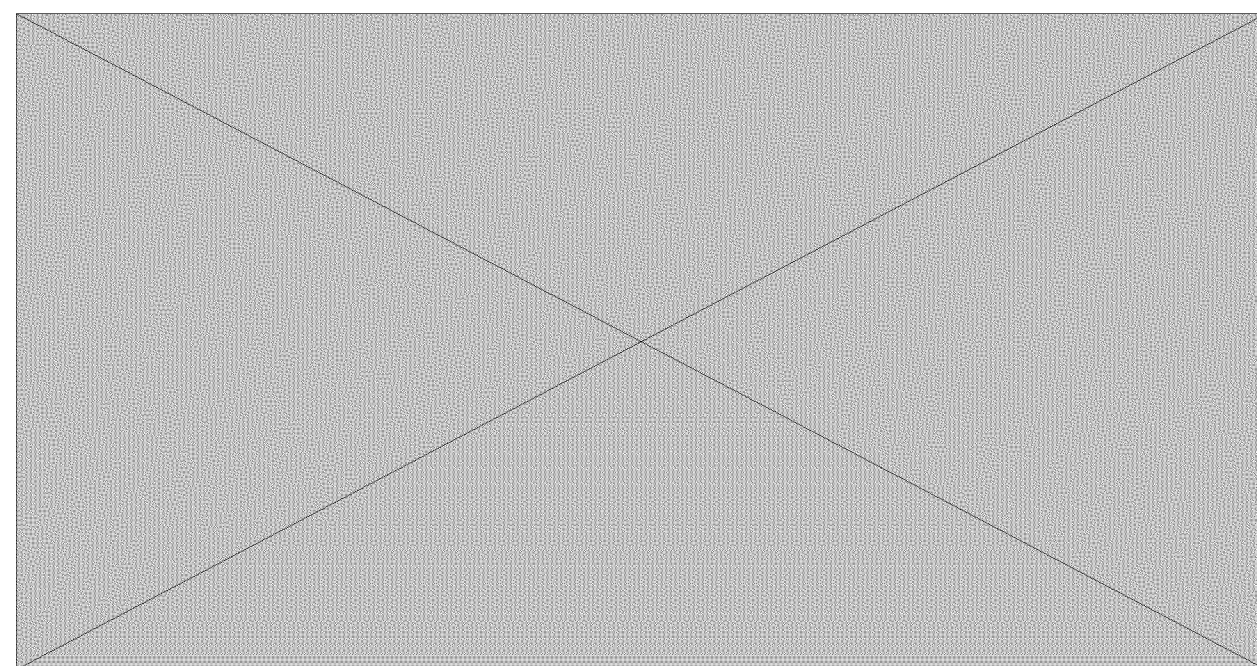


Figure 5 displays the Forum process for Project Management and Workflow for development, implementation, and validation of standards, best practices, guidelines.

Sent: Friday, March 13, 2020 9:03 AM

To: _____

Cc: Subject: Re: Red Dawn Raging Start March 4

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

Virginia is developing its own coronavirus tests, and urged public schools to make their own decisions on whether to cancel classes. Loudoun County Public Schools will be closed through next week. Fairfax County, the region’s largest school system, announced late Thursday that it would be closed Friday and was cancelling after-school activities and field trips through April 12; Fairfax schools were already slated to be closed Monday so staff could prepare to teach classes online if necessary.

From: cmecher@charter.net

To: _____

Cc: "Dr Eva Lee", James V", "Dr. Eva K Lee", "CHRISTOPHER ALLEN", "Tom Bossert", Gerald W", "Richard Hatchett",David (DSHS)", Eric", Luciana", "Brian Benson", "Tracey McNamara", "Duane Caneva", Ralph S", Carter (VA.GOV)", Richard (OS/ASPR/EMMO)", THOMAS", "M.D.", "David", "Charity A@CDPH", "Gregory J", William (STATE.GOV)", CAMERON",

(OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", "Matthew J CIV USARMY (USA)", "Lisa Koonin", MELISSA", HERBERT", Alexander", MARIEFRED", "jwleduc@utmb.edu", Robert (OS/ASPR/BARDA)", Kevin", Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", David (Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", Dan", David", DAVID A", SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", "Ryan Morhard", "Steven Jt(tCHFStDPH)", Jerome (HHS/OASH)", Monique K.", Jessica (USDA.GOV)", "DC", "dannyshiau@usuhs.edu", Jerome (CTR)", Jay J", Joselito", "Will Gaskins", "Kevin Montgomery", Linda L", "LLogandakar", "rajeev.venkayya@takeda.com"

Sent: Friday March 13 2020 7:10:30AM

Subject: Re: Red Dawn Raging Start March 4

+Rajeev

From: cmecher@charter.net

To: _____

Cc: "Dr. Eva Lee", James V", "Dr. Eva K Lee",
"CHRISTOPHER ALLEN",
"Tom Bossert", Gerald W", "Richard Hatchett", David
(DSHS)", Eric", Luciana", "Brian Benson", "Tracey
McNamara", "Duane Caneva", Ralph S", Carter (VA.GOV)",
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"jwleduc@utmb.edu", Robert (OS/ASPR/BARDA)", Kevin",
Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", David
(Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", Dan",
David", DAVID A", SANGEETA", Scott
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Jt(tCHFStDPH)", Jerome (HHS/OASH)", Monique K.",
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Jerome (CTR)", Jay J", Joselito", "Will Gaskins", "Kevin
Montgomery", Linda L", "LLogandakar"

Sent: Friday March 13 2020 7:09:26AM

Subject: Re: Red Dawn Raging Start March 4

This is what leadership looks like.

“We whole-heartedly endorse the bold and decisive decisions of our Governor here today. This is not about a healthcare system; this is about all of us. We can all fight back against this virus, and in fact, we need to. The health care system can treat those who are ill; and across all of Maryland, we’re readying ourselves in case we need to. However, by putting aggressive steps in place that the Governor just outlined with regard to social distancing, closures of schools, teleworking – these are steps we can all adopt...the earlier we do this, the more layers we put in place, the less this virus can be transmitted. That’s the key.” Dr. Marcozzi, at a press conference hosted by Governor Larry Hogan announcing major steps in the state of Maryland’s COVID-19 response. Those steps included

- Maryland Emergency Management Agency increase activation to highest level
- Activate national guard

- All state government is raised to elevated level 2 - all non-essential employees who can telework required to do so
- Public access to state buildings restricted
- **No gatherings of more than 250+ people** (including sports and religious gatherings)
- All senior centers closed
- All state and local government buildings with more than 250+ people must follow social distancing
- Close cruise ship terminal in Baltimore
- Extension of expiration dates on permits including drivers licenses, license plates, professional licenses, until 30 days after end of state of emergency
- All hospitals adopt new visitor policies to stop spread of COVID-19
- All prisons will suspend visits
- All non-essential functions of government are now managed by Lt Gov Rutherford so Gov Hogan can focus solely on COVID-19

○ **Monday, March 16 through Friday, March**

27 - all public schools closed

- Measures taken to provide child care for essential workers/first responders

From: cmecher@charter.net

To: "Dr. Eva Lee"

Cc: James V", "Dr. Eva K Lee", "CHRISTOPHER ALLEN", "Tom Bossert", Gerald W", "Richard Hatchett", David (DSHS)", Eric", Luciana", "Brian Benson", "Tracey McNamara", "Duane Caneva", Ralph S",

Carter (VA.GOV)", Richard (OS/ASPR/EMMO)", THOMAS", "M.D.", "David", "Charity A@CDPH", "Gregory J", William (STATE.GOV)", CAMERON", (OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", "Matthew J CIV USARMY (USA)", "Lisa Koonin", MELISSA", HERBERT", Alexander", MARIEFRED", "jwleduc@utmb.edu", Robert (OS/ASPR/BARDA)", Kevin", Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", David (Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", Dan", David", DAVID A", SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", "Ryan Morhard", "Steven Jt(tCHFStDPH)", Jerome (HHS/OASH)", Monique K.", Jessica (USDA.GOV)", "DC", "danny.shiau@usuhs.edu", Jerome (CTR)", Jay J", Joselito", "Will Gaskins", "Kevin Montgomery", Linda L", "LLogandakar"

Sent: Thursday March 12 2020 10:30:31PM

Subject: Re: Red Dawn Raging Start March 4

<https://www.chicagotribune.com/coronavirus/ct-nw-coronavirus-united-states-school-closings-20200312-sh2d5vi525drvcf5dwm7hnebru-story.html>

Here is the list of states now closing schools. Add Kentucky too. Illinois had a press briefing and they are getting ready.

Getting close to the tipping point.

From: "Dr. Eva Lee"

To: James V"

Cc: "Dr. Eva K Lee", "CHRISTOPHER ALLEN", "Tom Bossert", Gerald W", "Richard Hatchett",David (DSHS)", Eric", Luciana", "Brian Benson", "Tracey McNamara", "Duane Caneva", Ralph S", Carter (VA.GOV)", Richard (OS/ASPR/EMMO)", THOMAS", "M.D.", "David", "Charity A@CDPH", "Gregory J", William (STATE.GOV)", CAMERON",

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Sent: Thursday March 12 2020 9:45:09PM

Subject: Re: Red Dawn Raging Start March 4

This is great. WA is not quite fully, just partial. MA, CA, and NY should act immediately. They have big fire to fight.

Grocery store is very long line now (in Atlanta)! And shelves are very empty. Oh dear!

On Thu, Mar 12, 2020 at 9:14 PM Lawler, James V <james.lawler@unmc.edu> wrote:

NE has its finger on the trigger. We will pull (regionally) as soon as we hit our threshold. Full NPI. We have great state leadership on this.

James Lawler, MD, MPH, FIDSA
Director, International Programs & Innovation
Global Center for Health Security, and
Associate Professor of Medicine
Division of Infectious Diseases
University of Nebraska Medical Center

m:

james.lawler@unmc.edu

From: _____
Sent: Friday, March 13, 2020 4:00:38 AM
To: _____
Cc: 'Dr. Eva K Lee'
'CHRISTOPHER ALLEN' 'Dr.
Eva Lee' Lawler, James V
<james.lawler@unmc.edu>;
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'Parker Jr, Gerald W'
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 David (Chris) (OS/ASPR/IO)' <David.Hassell@hhs.gov>;
 'Hamel, Joseph (OS/ASPR/IO)' <Joseph.Hamel@hhs.gov>;
 'Hanfling, Dan' <DHanfling@iq.t.org>; 'Wade, David'
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 <PadgetLG@state.gov>; 'Ryan Morhard'
 <Ryan.Morhard@weforum.org>; 'Steven Jt(tCHFStDPH)'
 <steven.stack@ky.gov>; 'Adams, Jerome (HHS/OASH)'
 <Jerome.Adams@hhs.gov>; 'Mansoura, Monique K.'
 <mmansoura@mitre.org>; 'Fantinato, Jessica (USDA.GOV)'
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 <danny.shiau@usuhs.edu>; 'Cordts, Jerome (CTR)'
 <jerome.cordts@associates.hq.dhs.gov>; 'Schnitzer, Jay J'
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 <joselito.ignacio@fema.dhs.gov>; 'Will Gaskins'
 <will.gaskins@efiia.com>; 'Kevin Montgomery'
 <kevin@collaborate.org>; 'Logan, Linda L'
 <llogan@cvm.tamu.edu>; 'LLogandakar'

Subject: RE: Red Dawn Raging Start March 4

Non-UNMC email

Pennsylvania Governor Wolf closes all schools, community centers, gyms, and entertainment venues in Montgomery County due to coronavirus - WPVI

Houston Independent School District, one of the largest in the U.S., closes all schools until March 30 due to coronavirus

So now we have: (1) MD; (2) OH; (3) GA; (4) PA; (5) TX

From: cmecher@charter.net

To: "Dr. Eva K Lee"

Cc: "CHRISTOPHER ALLEN", "Dr. Eva Lee", James V",
"Tom Bossert", Gerald W",
"Richard Hatchett", David (DSHS)", Eric", Luciana", "Brian Benson", "Tracey McNamara", "Duane Caneva", Ralph S",
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David", DAVID A", SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", "Ryan Morhard", "Steven Jt(tCHFStDPH)", Jerome (HHS/OASH)", Monique K.",
Jessica (USDA.GOV)", "DC", "danny.shiau@usuhs.edu",
Jerome (CTR)", Jay J", Joselito", "Will Gaskins", "Kevin Montgomery", Linda L", "LLogandakar"

Sent: Thursday March 12 2020 5:34:21PM

Subject: RE: Red Dawn Raging Start March 4

Georgia schools are closing now--Cobb County, Fulton County, Atlanta Public Schools (those are the big ones). I reached out to the superintendent early today and government leaders.

From: "Dr. Eva K Lee"

To: "Carter Mecher"

Cc: "CHRISTOPHER ALLEN", "Dr. Eva Lee", James V",
"Tom Bossert", Gerald W",
"Richard Hatchett", David (DSHS)", Eric", Luciana", "Brian

Benson", "Tracey McNamara", "Duane Caneva", Ralph S",
Carter ([VA.GOV](#))", Richard (OS/ASPR/EMMO)",
THOMAS", "M.D.", "David", "Charity A@CDPH",
"Gregory J", William ([STATE.GOV](#))", CAMERON",

(OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", "Matthew J
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Jt(tCHFStDPH)", Jerome (HHS/OASH)", Monique K.",
Jessica ([USDA.GOV](#))", "DC", "danny.shiau@usuhs.edu",
Jerome (CTR)", Jay J", Joselito", "Will Gaskins", "Kevin
Montgomery", Linda L", "LLogandakar"

Sent: Thursday March 12 2020 4:43:02PM

Subject: RE: Red Dawn Raging Start March 4

Great, even though it is one step at a time. By the way, I
have discovered something uniformly true across all sites --
when we saw the first case, we're exactly 2 weeks behind the
disease spread already. It is very interesting. Hence I told
David Marcozzi that a single case as a trigger is a good
trigger, because that's when you know there're already many
"unknown" ones circulating in the community. I saw the
patterns now on many cites I think I made that statement
already for quite many weeks. But it is interesting to see how
beautiful those numbers line up. Oh, I just got off the phone
with the Washington Post reporter. She wanted to talk to me
a few days ago. Finally she got hold of me. I made a point
that it is not one piecemeal action at a time. NPI (schools,
workers, worships, events, etc) must be rolled out now so
that we can put a brake on and benefit from the full effect.
Otherwise, a little here and a little there won't make a dent.
She asked me about politicians (who has read my models). I
have no idea. Good that I have no head for that and I told
her I would like her article to be factual and speak to the
American people and also perhaps speak to the leaders too so
they can all work together with one common goal -- beat the
virus and stay ahead of it instead of chasing after it with little
batches. Don't know what she would write, but she seems
quite interested in the work.

[newton.isye.gatech.edu]
[newtonisye.gatech.edu]<https://newton.isyegatech.edu/DrLee>

/ [newton.isye.gatech.edu]

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On Thursday, March 12, 2020 4:17 PM, Carter Mecher
wrote:

Ohio closing schools.

Ohio schools to close for 3 weeks during coronavirus ‘crisis;’ Gov. DeWine bans gatherings of more than 100 people

Georgia not mandating but asking districts to consider.

There is no Rupert Blue among any of the Federal leaders. It must come from the states and the Governors.

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From: CHRISTOPHER ALLEN

Sent: Thursday, March 12, 2020 3:03 PM

To: Carter Mecher; Dr. Eva Lee; Lawler, James V;

Cc: Dr. Eva K Lee; Tom Bossert; Parker Jr, Gerald W; Richard Hatchett; Gruber,David (DSHS); McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Duane Caneva; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON;

Dodgen,tDanielt(OS/ASPR/SPPR); DeBord,Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Hanfling, Dan; Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH); Adams, Jerome (HHS/OASH); Mansoura, Monique K.; Fantinato, Jessica (USDA.GOV); DC; danny.shiau@usuhs.edu; Cordts, Jerome (CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; Kevin Montgomery; Logan, Linda L; LLogandakar

Subject: Re: Red Dawn Raging Start March 4

Eva, Carter, James - All

Understanding that we are in the heat of the battle -

wanted to share the attached with the thinking of equating the timing of response (federal/state/local) with economic cost. The ability to model trajectories based on the attached model or perhaps something similar might more fully inform the timing of response activities in order to strike a balance between responding to early vs. responding to late - pro-active data driven decision making vs. reactive.

This model was developed during H1N1 and derived from a variant similarly applied post 911 activities.

Best,

Chris Allen

Chief IT Officer (ret)

Department of Homeland Security

(m)

From: Carter Mecher
Sent: Thursday, March 12, 2020 2:28 PM
To: Dr. Eva Lee <eva.evalee.
Lawler, James V <james.lawler@unmc.edu>
Cc: Dr. Eva K Lee Tom
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**Subject:** RE: Red Dawn Raging Start March 4

[[nejm.org](http://nejm.org)]  
[[nejm.org](https://www.nejm.org/doi/full/10.1056/NEJMc2003717?query=RP)]  
<https://www.nejm.org/doi/full/10.1056/NEJMc2003717?query=RP> [nejm.org]

Detection of Covid-19 in Children in Early January  
2020 in Wuhan, China

This study showed that Covid-19 occurred in children, causing moderate-to-severe respiratory illness, in the early phase of the SARS-CoV-2 outbreak in Wuhan and was associated with ICU admission in one patient. None of the patients or their family members had had direct exposure to Huanan Seafood Wholesale Market (the initial location to which cases of Covid-19 were linked) or to one another. It is worth mentioning that we unexpectedly found a case of Covid-19 in one patient (Patient 3) who resided outside Wuhan; this patient had illness onset on January 2, 2020. The patient and her family were residents of the Yangxin area of Huangshi and had not traveled outside the city in the month before illness onset. We have not identified the source of infection for this patient. Our findings indicate that SARS-CoV-2 infections in children were occurring early in the epidemic.

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**From:** Carter Mecher

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**Sent:** Thursday, March 12, 2020 1:53 PM

**To:** Dr. Eva Lee; Lawler, James V

**Cc:** Dr. Eva K Lee; Tom Bossert; Parker Jr, Gerald W; Richard Hatchett; Gruber,David (DSHS); McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Duane Caneva; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON; rjglassjr@gmailcom; Dodgen,tDanielt(OS/ASPR/SPPR); DeBord,Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Hanfling, Dan; Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH ); Adams, Jerome (HHS/OASH); Mansoura, Monique K.; Fantinato, Jessica (USDA.GOV); DC; danny.shiau@usuhs.edu;

Cordts, Jerome (CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; CHRISTOPHER ALLEN; Kevin Montgomery; Logan, Linda L; LLogandakar

**Subject:** RE: Red Dawn Raging Start March 4

On a different note, I realized we were sitting on top of some really useful data in terms hospital lengths of stay. I have been tracking hospital data on Hubei since the beginning. Each day Hubei provides the current number of patients in the hospital (hospital census) with a break down by condition (serious and critical). If I sum the daily hospital census, I have a count of total BDOCs. I can do that for all hospitalized patients and also those who are critical (assuming those represent ICU patients). For the hospitalized patients, I can divide the total BDOCs by the cumulative number of confirmed cases and estimate a hospital LOS (the average is 16 days). The ICU is a bit trickier. I assumed that 5% of the confirmed cases would require ICU care. So divide the total ICU BDOCs by the cumulative confirmed cases multiplied by 5%. The average ICU LOS is 16 days. See below. Eva and Nathaniel, you might to use these numbers. These are probably the best numbers we can find.

|         | Hubei COVID-19 Confirmed |              |              |          |
|---------|--------------------------|--------------|--------------|----------|
| Date    | Total Current Inpatients | Mild Disease | Severely Ill | Critical |
| 1/14/20 | 6                        |              | 6            |          |

|         |     |     |     |    |
|---------|-----|-----|-----|----|
|         |     |     |     |    |
| 1/15/20 | 5   |     | 5   |    |
| 1/16/20 | 5   |     | 5   |    |
| 1/17/20 | 8   |     | 8   |    |
| 1/18/20 | 136 | 100 | 33  | 3  |
| 1/19/20 | 170 | 126 | 35  | 9  |
| 1/20/20 | 239 | 176 | 51  | 12 |
| 1/21/20 |     |     |     |    |
| 1/22/20 | 399 | 304 | 71  | 24 |
| 1/23/20 | 494 | 365 | 106 | 23 |
| 1/24/20 | 658 | 472 | 129 | 57 |

|         |       |       |       |     |
|---------|-------|-------|-------|-----|
|         |       |       |       |     |
| 1/25/20 | 915   |       | 221   |     |
| 1/26/20 | 1,645 | 1,013 | 563   | 69  |
| 1/27/20 | 2,567 | 1,877 | 563   | 127 |
| 1/28/20 | 3,349 | 2,450 | 671   | 228 |
| 1/29/20 |       | 3,346 | 711   | 277 |
|         | 4,334 |       |       |     |
| 1/30/20 | 5,486 | 4,392 | 804   | 290 |
| 1/31/20 | 6,738 | 5,444 |       | 338 |
|         |       |       | 956   |     |
| 2/1/20  | 8,565 | 7,003 | 1,118 | 444 |

|        |        |        |       |       |
|--------|--------|--------|-------|-------|
| 2/2/20 | 9,618  | 7,917  | 1,223 | 478   |
| 2/3/20 | 10,990 | 8,857  | 1,557 | 576   |
| 2/4/20 | 12,627 | 10,107 | 1,809 | 711   |
| 2/5/20 | 14,314 | 11,230 | 2,328 | 756   |
| 2/6/20 | 15,804 | 11,802 | 3,161 | 841   |
| 2/7/20 | 19,835 | 14,640 | 4,188 | 1,007 |
| 2/8/20 | 20,993 | 15,746 | 4,093 | 1     |

|         |        |        |       |       |
|---------|--------|--------|-------|-------|
|         |        |        |       | 154   |
| 2/9/20  | 22,160 | 16,655 | 4,269 | 1,236 |
| 2/10/20 | 25,087 | 18,743 | 5,046 | 1,298 |
| 2/11/20 | 26,121 | 18,880 | 5,724 | 1,517 |
| 2/12/20 | 33,693 | 26,609 | 5,647 | 1,437 |
| 2/13/20 | 36,719 | 27,081 | 7,953 | 1,685 |
| 2/14/20 | 38,107 | 27,955 | 8,276 | 1,876 |

|         |        |        |       |       |  |
|---------|--------|--------|-------|-------|--|
|         |        |        |       |       |  |
| 2/15/20 | 39,447 | 29,051 | 8,439 | 1,957 |  |
| 2/16/20 | 40,814 | 31,017 | 8,024 | 1,773 |  |
| 2/17/20 | 41,957 | 30,987 | 9,117 | 1,853 |  |
| 2/18/20 | 43,471 | 32,225 | 9,289 | 1,957 |  |
| 2/19/20 | 43,745 | 32,567 | 9,128 | 2,050 |  |
| 2/20/20 | 42,056 | 31,059 | 8,979 | 2,018 |  |
| 2/21/20 | 41,036 | 30,144 |       | 2,49  |  |



|         |        |        |       |       |
|---------|--------|--------|-------|-------|
|         |        |        | 8,400 | 2     |
| 2/22/20 | 40,127 | 29,429 | 8,853 | 1,845 |
| 2/23/20 | 39,073 | 29,643 | 7,776 | 1,654 |
| 2/24/20 | 37,896 | 29,221 | 7,090 | 1,585 |
| 2/25/20 | 36,242 | 27,916 | 6,840 | 1,486 |
| 2/26/20 | 34,978 | 26,994 | 6,581 | 1,403 |
| 2/27/20 | 32,878 | 25,245 | 6,270 | 1,363 |
| 2/28/20 | 31,064 | 23,694 | 6,056 | 1,3   |

|         |        |        |       |       |
|---------|--------|--------|-------|-------|
|         |        |        |       | 14    |
| 2/29/20 | 28,912 | 21,805 | 5,858 | 1,249 |
| 3/1/20  | 26,901 | 20,029 | 5,646 | 1,226 |
| 3/2/20  | 25,050 | 18,457 | 5,407 | 1,186 |
| 3/3/20  | 23,039 | 16,807 | 5,095 | 1,137 |
| 3/4/20  | 20,765 | 14,977 | 4,747 | 1,041 |
| 3/5/20  | 19,758 | 14,170 | 4,592 | 996   |
| 3/6/20  | 18,518 | 13,159 | 4,395 | 96    |

|             |           |        |       |        |
|-------------|-----------|--------|-------|--------|
|             |           |        |       | 4      |
| 3/7/20      | 17,078    | 11,938 | 4,206 | 934    |
| 3/8/20      |           |        | 4,101 | 890    |
|             | 15,826    | 10,835 |       |        |
| 3/9/20      | 14,957    | 10,256 | 3,855 | 846    |
| 3/10/20     | 13,712    | 9,300  | 3,613 | 799    |
| 3/11/20     | 12,769    | 8,589  | 3,453 | 727    |
| Total BDOCs | 1,103,287 |        |       | 53,194 |
| LOS         | 16        |        |       | 16     |

Sent from Mail [go.microsoft.com] for Windows 10

**From:** Dr. Eva Lee

**Sent:** Thursday, March 12, 2020 1:28 PM

**To:** Lawler, James V

**Cc:** Carter Mecher; Dr. Eva K Lee; Tom Bossert; Parker Jr, Gerald W; Richard Hatchett; Gruber,David (DSHS); McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Duane Caneva; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON; Dodgen,tDanielt(OS/ASPR/SPPR); DeBord,Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Hanfling, Dan; Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH ); Adams, Jerome (HHS/OASH); Mansoura, Monique K.; Fantinato, Jessica (USDA.GOV); DC; danny.shiau@usuhs.edu; Cordts, Jerome (CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; CHRISTOPHER ALLEN; Kevin Montgomery; Logan, Linda L; LLogandakar

**Subject:** Re: Red Dawn Raging Start March 4

Yes, very very sad -- it's all the planning and we must execute and we can't execute!

On Thu, Mar 12, 2020 at 1:22 PM Lawler, James V <james.lawler@unmc.edu> wrote:

We are making every misstep leaders initially made in table-tops at the outset of pandemic planning in 2006. We had systematically addressed all of these and had a plan that would work – and has worked in Hong Kong/Singapore. We have thrown 15 years of institutional learning out the window and are making decisions based on intuition.

Pilots can tell you what happens when a crew makes decisions based on intuition rather than what their instruments are telling them

And we continue to push the stick forward...

**James Lawler, MD, MPH, FIDSA**

m:

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**From:** Carter Mecher

**Date:** Thursday, March 12, 2020 at 8:08 PM

**To:** "Dr. Eva K Lee"

**Cc:** "Lawler, James V" <[james.lawler@unmc.edu](mailto:james.lawler@unmc.edu)>, Tom Bossert "Parker Jr, Gerald W" <[gparker@cvm.tamu.edu](mailto:gparker@cvm.tamu.edu)>, Richard Hatchett <[richard.hatchett@cepi.net](mailto:richard.hatchett@cepi.net)>, "Gruber, David (DSHS)" <[David.Gruber@dshs.texas.gov](mailto:David.Gruber@dshs.texas.gov)>, "Dr. Eva Lee" <[eva.evalee](mailto:eva.evalee)> "McDonald, Eric" <[Eric.McDonald@sdcountry.ca.gov](mailto:Eric.McDonald@sdcountry.ca.gov)>, "Borio, Luciana" <[LBorio@iq.t.org](mailto:LBorio@iq.t.org)>, Brian Benson

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**Subject:** RE: Red Dawn Raging Start March 4

Non-UNMC email

This coming Saturday will mark two weeks since the first death in the US. On Saturday (likely by then we will have ~2,500 cases and 75 deaths given the current trajectory), ask yourself, what do you wish we would have done 2 weeks earlier on Feb 29? I don't think shutting down travel with Europe would have made the list. If you can answer that question truthfully now, then what are we waiting for?

Sent from Mail [go.microsoft.com] for Windows 10

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**From:** Dr. Eva K Lee

**Sent:** Thursday, March 12, 2020 12:54 PM

**To:** Carter Mecher

**Cc:** Lawler, James V; Tom Bossert; Parker Jr, Gerald W; Richard Hatchett; Gruber, David (DSHS); Dr. Eva Lee; McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Duane Caneva; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON;

Dodgen, tDaniel(OS/ASPR/SPPR); DeBord, Kristin  
(OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR);  
Matthew J CIV USARMY (USA); Lisa Koonin;  
HARVEY, MELISSA; WOLFE, HERBERT;  
Eastman, Alexander; EVANS, MARIEFRED;  
jwleduc@utmb.edu; Johnson, Robert  
(OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary  
(OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR);  
Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph  
(OS/ASPR/IO); Hanfling, Dan; Wade, David;  
TARANTINO, DAVID A; KAUSHIK, SANGEETA;  
Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan  
Morhard; Steven Jt(tCHFStDPH ); Adams, Jerome  
(HHS/OASH); Mansoura, Monique K.; Fantinato,  
Jessica (USDA.GOV); DC; danny.shiau@usuhs.edu;  
Cordts, Jerome (CTR); Schnitzer, Jay J; Ignacio,  
Joselito; Will Gaskins; CHRISTOPHER ALLEN;  
Kevin Montgomery; Logan, Linda L; LLogandakar

**Subject:** RE: Red Dawn Raging Start March 4

Oh, I just heart that DC business is closing and do tele-work, and no church services. Are they not real? And I also heard more governors are "banning" large gatherings. I thought it's in the news. Are they not? I was with a reporter and hence didn't see anything. Some reporters wanted to speak to me on covid-19 models. I didn't agree for a few days but today I have spoken to some. Washington post is going to call me.

I thought everyone has put on a brake, so it's only my imagination? Too bad.

[[newton.isye.gatechedu](https://newton.isye.gatech.edu)]<https://newton.isye.gatech.edu>  
/DrLee/ [[newton.isye.gatech.edu](https://newton.isye.gatech.edu)]  
[[newton.isye.gatech.edu](https://newton.isye.gatech.edu)]

mobile:

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On Thursday, March 12, 2020 12:49 PM, Carter Mecher \_\_\_\_\_ wrote:

We haven't applied the brakes. We took it off cruise control and that is about it.

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---

**From:** [Dr. Eva K Lee](#)

**Sent:** Thursday, March 12, 2020 12:45 PM

**To:** [Carter Mecher](#)

**Cc:** [Lawler, James V](#); [Tom Bossert](#); [Parker Jr, Gerald W](#); [Richard Hatchett](#); [Gruber, David \(DSHS\)](#); [Dr. Eva Lee](#); [McDonald, Eric](#); [Borio, Luciana](#); [Brian Benson](#); [Tracey McNamara](#); [Duane Caneva](#); [Baric, Ralph S](#); [Mecher, Carter \(VA.GOV\)](#); [Hunt, Richard \(OS/ASPR/EMMO\)](#); [WILKINSON, THOMAS; M.D.](#); [David](#); [Charity A@CDPH](#); [Gregory J](#); [Walters, William \(STATE.GOV\)](#); [HAMILTON, CAMERON](#); [Dodgen,](#)



Daniel(OS/ASPR/SPPR); DeBord,Kristin  
(OS/ASPR/SPPR); Phillips, Sally  
(OS/ASPR/SPPR); Matthew J CIV USARMY  
(USA); Lisa Koonin; HARVEY, MELISSA;  
WOLFE, HERBERT; Eastman, Alexander;  
EVANS, MARIEFRED; jwleduc@utmb.edu;  
Johnson, Robert (OS/ASPR/BARDA); Yeskey,  
Kevin; Disbrow, Gary (OS/ASPR/BARDA);  
Redd, John (OS/ASPR/SPPR); Hassell, David  
(Chris) (OS/ASPR/IO); Hamel, Joseph  
(OS/ASPR/IO); Hanfling, Dan; Wade, David;  
TARANTINO, DAVID A; KAUSHIK,  
SANGEETA; Lee, Scott (OS/ASPR/EMMO);  
Larry G; Ryan Morhard; Steven Jt(tCHFStDPH  
) ; Adams, Jerome (HHS/OASH); Mansoura,  
Monique K.; Fantinato, Jessica (USDA.GOV);  
DC; danny.shiau@usuhs.edu; Cordts, Jerome  
(CTR); Schnitzer, Jay J; Ignacio, Joselito; Will  
Gaskins; CHRISTOPHER ALLEN; Kevin  
Montgomery; Logan, Linda L; LLogandakar

**Subject:** RE: Red Dawn Raging Start March 4

yes the brake is on, and that's all good.  
Healthcare providers are cirital to protect  
them.. We must because those resources are  
precious and we will need all of them as we see  
more severe cases But if all brakes are on, we  
can slow down the infection so we can address  
the hospital issues.

[urldefensecom]  
[newton.isye.gatech.edu]https://newton.isye.gate  
ch.edu/DrLee/ [newton.isye.gatech.edu]  
[newton.isye.gatech.edu]

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On Thursday, March 12, 2020 10:14 AM, Carter Mecher \_\_\_\_\_ wrote:

Good news.

Princess Cruises says it is pausing all operations for 2 months after two of their ships were at the center of coronavirus outbreaks.

I have six kids. My youngest is a senior at UGA. He is home on spring break and UGA announced that school will remain closed until at least April 8<sup>th</sup>.

My sense is that colleges and universities across the US will be closing down since they do not present the same issues as K-12 (school meals and adult absenteeism related to child minding). There are 19M colleges students in the US—so an important piece. Then add in the employees and staff at colleges who now are working in an effectively socially-distanced workplace. There are nearly 60M kids attending K-12. 17M of those are home schooled (so they are already

taken care of). We are having conversations with the private schools (5.8M students). The private schools seem much more amenable to closure and are already doing so. There are 50.6 M kids attending public school K-12. We are shrinking the problem. Has anyone in public health asked a simple question? If you look at state and local government employees, the majority work for education. Any idea what % are high risk (age>60)? We looked in VA with 400K employees (17% of our employee are age>60). A significantly higher % of our physicians are >60.

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**From:** Carter Mecher

**Sent:** Thursday, March 12, 2020 9:02 AM

**To:** Lawler, James V; Tom Bossert; Parker Jr, Gerald W

**Cc:** Richard Hatchett; Dr. Eva K Lee; Gruber,David (DSHS); Dr. Eva Lee; McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Duane Caneva; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON; Dodgen, Daniel (OS/ASPR/SPPR); DeBord,Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Hanfling, Dan; Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan

Morhard; Steven Jt(tCHFStDPH );  
Adams, Jerome (HHS/OASH); Mansoura,  
Monique K.; Fantino, Jessica  
(USDA.GOV); DC;  
danny.shiau@usuhs.edu; Cordts, Jerome  
(CTR); Schnitzer, Jay J; Ignacio, Joselito;  
Will Gaskins; CHRISTOPHER ALLEN;  
Kevin Montgomery; Logan, Linda L;  
LLogandakar

**Subject:** RE: Red Dawn Raging Start  
March 4

Attached is the household data. Would  
ask others to review to doublecheck.

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Windows 10

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**From:** Carter Mecher

**Sent:** Thursday, March 12, 2020 8:58 AM

**To:** Lawler, James V; Tom Bossert;  
Parker Jr, Gerald W

**Cc:** Richard Hatchett; Dr. Eva K Lee;  
Gruber,David (DSHS); Dr. Eva Lee;  
McDonald, Eric; Borio, Luciana; Brian  
Benson; Tracey McNamara; Duane  
Caneva; Baric, Ralph S; Mecher, Carter  
(VA.GOV); Hunt, Richard  
(OS/ASPR/EMMO); WILKINSON,  
THOMAS; M.D.; David; Charity  
A@CDPH; Gregory J; Walters, William  
(STATE.GOV); HAMILTON,  
CAMERON;  
Dodgen, Daniel (OS/ASPR/SPPR);  
DeBord,Kristin (OS/ASPR/SPPR);  
Phillips, Sally (OS/ASPR/SPPR);  
Matthew J CIV USARMY (USA); Lisa  
Koonin; HARVEY, MELISSA; WOLFE,  
HERBERT; Eastman, Alexander;  
EVANS, MARIEFRED;  
jwleduc@utmb.edu; Johnson, Robert  
(OS/ASPR/BARDA); Yeskey, Kevin;  
Disbrow, Gary (OS/ASPR/BARDA);  
Redd, John (OS/ASPR/SPPR); Hassell,  
David (Chris) (OS/ASPR/IO); Hamel,  
Joseph (OS/ASPR/IO); Hanfling, Dan;  
Wade, David; TARANTINO, DAVID A;

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KAUSHIK, SANGEETA; Lee, Scott  
(OS/ASPR/EMMO); Larry G; Ryan  
Morhard; Steven Jt(tCHFStDPH );  
Adams, Jerome (HHS/OASH); Mansoura,  
Monique K.; Fantinato, Jessica  
(USDA.GOV); DC;  
danny.shiau@usuhs.edu; Cordts, Jerome  
(CTR); Schnitzer, Jay J; Ignacio, Joselito;  
Will Gaskins; CHRISTOPHER ALLEN;  
Kevin Montgomery; Logan, Linda L;  
LLogandakar

**Subject:** RE: Red Dawn Raging Start  
March 4

I put all my thoughts together for the defense of school closure. A little long, but I am sharing so that the opponents of school closure understand the arguments they will face if they do not act and it turns out they were terribly wrong.

One statistic that really stuck me as I looked thru the American Survey Data. There are 120 M households in the US. Only 1% of the households in the United States have children and a senior adult present (1.27 M households)

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**From:** Lawler, James V

**Sent:** Thursday, March 12, 2020 7:34 AM

**To:** Tom Bossert; Parker Jr, Gerald W

**Cc:** Richard Hatchett; Carter Mecher; Dr. Eva K Lee; Gruber,David (DSHS); Dr. Eva Lee; McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Duane Caneva; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON,

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CAMERON;  
Dodgen, Daniel (OS/ASPR/SPPR);  
DeBord, Kristin (OS/ASPR/SPPR);  
Phillips, Sally (OS/ASPR/SPPR);  
Matthew J CIV USARMY (USA); Lisa  
Koonin; HARVEY, MELISSA; WOLFE,  
HERBERT; Eastman, Alexander;  
EVANS, MARIEFRED;  
jwleduc@utmb.edu; Johnson, Robert  
(OS/ASPR/BARDA); Yeskey, Kevin;  
Disbrow, Gary (OS/ASPR/BARDA);  
Redd, John (OS/ASPR/SPPR); Hassell,  
David (Chris) (OS/ASPR/IO); Hamel,  
Joseph (OS/ASPR/IO); Hanfling, Dan;  
Wade, David; TARANTINO, DAVID A;  
KAUSHIK, SANGEETA; Lee, Scott  
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Morhard; Steven Jt(tCHFStDPH);  
Adams, Jerome (HHS/OASH); Mansoura,  
Monique K.; Fantinato, Jessica  
(USDA.GOV); DC;  
danny.shiau@usuhs.edu; Cordts, Jerome  
(CTR); Schnitzer, Jay J; Ignacio, Joselito;  
Will Gaskins; CHRISTOPHER ALLEN;  
Kevin Montgomery; Logan, Linda L;  
LLogandakar

**Subject:** Re: Red Dawn Raging Start  
March 4

Like it Tom. The message is : let's be  
Singapore and Hong Kong, not Italy. And  
given the current state of our public health  
infrastructure we need to implement all  
NPI in affected communities

James Lawler, MD, MPH, FIDSA

Director, International Programs &  
Innovation

Global Center for Health Security, and

Associate Professor of Medicine

Division of Infectious Diseases

University of Nebraska Medical Center

m:

[james.lawler@unmc.edu](mailto:james.lawler@unmc.edu)

**From:** Tom Bossert

**Sent:** Thursday, March 12, 2020 2:08:34 PM

**To:** Parker Jr, Gerald W  
<[gparker@cvm.tamu.edu](mailto:gparkercvm@tamut.edu)>

**Cc:** Richard Hatchett  
<[richard.hatchett@cepi.net](mailto:richard.hatchett@cepi.net)>; Carter  
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K Lee

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KAUSHIK, SANGEETA  
<sangeeta.kaushik@hq.dhs.gov>; Lee,  
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<Ryan.Morhard@weforum.org>; Steven  
Jt(tCHFStDPH ) <steven.stack@ky.gov>;  
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Fantinato, Jessica (USDA.GOV  
[usda.gov])  
<jessica.fantinato@usda.gov>; DC  
<michelle.colby@usda.gov>;  
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<danny.shiau@usuhs.edu>; Cordts,  
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<jerome.cordts@associates.hq.dhs.gov>;  
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Ignacio, Joselito  
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Gaskins <will.gaskins@efia.com>;  
CHRISTOPHER ALLEN

Kevin

Montgomery <kevin@collaborate.org>;  
Logan, Linda L <llogan@cvm.tamu.edu>;  
LLogandakar

**Subject:** Re: Red Dawn Raging Start  
March 4



We are making great progress. My message today on US TV will be as follows:

- The biggest misunderstanding about #coronavirus interventions is they are an à la carte menu of options to be selectively implemented. This is dead wrong. They ALL must be implemented to achieve a layered effect. Removing any one can defeat all. For instance, close schools AND cancel events.

- There's little value to European travel restrictions. Poor use of time & energy. Earlier, yes. Now, travel restrictions and screening are less useful. We have nearly as much disease here in the US as the countries in Europe. We MUST focus on layered community mitigation measures- Now!

-Tom

On Mar 12, 2020, at 12:44 AM,  
Parker Jr, Gerald W  
<[gparker@cvm.tamu.edu](mailto:gparker@cvm.tamu.edu)> wrote:

Richard, I will use it tomorrow.  
Thanks!

Get [Outlook for iOS](#)

**From:** Richard Hatchett  
<[richardhatchett@cepi.net](mailto:richardhatchett@cepi.net)>

**Sent:** Wednesday, March 11, 2020  
23:41

**To:** Parker Jr, Gerald W

**Cc:** Tom Bossert; Carter Mecher;  
Dr. Eva K Lee; Gruber, David  
(DSHS); Dr. Eva Lee; McDonald,

Eric; Borio, Luciana; Brian Benson;  
Lawler, James V; Tracey  
McNamara; Duane Caneva; Baric,  
Ralph S; Mecher, Carter ([VA.GOV](mailto:VA.GOV)  
[[va.gov](mailto:va.gov)]); Hunt, Richard  
(OS/ASPR/EMMO); WILKINSON,  
THOMAS; M.D.; David; Charity  
A@CDPH; Gregory J; Walters,  
William ([STATE.GOV](mailto:STATE.GOV) [[state.gov](mailto:state.gov)]);  
HAMILTON, CAMERON;  
Dodgen,  
Daniel (OS/ASPR/SPPR);  
DeBord,Kristin (OS/ASPR/SPPR);  
Phillips, Sally (OS/ASPR/SPPR);  
Matthew J CIV USARMY (USA);  
Lisa Koonin; HARVEY,  
MELISSA; WOLFE, HERBERT;  
Eastman, Alexander; EVANS,  
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Adams, Jerome (HHS/OASH);  
Mansoura, Monique K.; Fantinato,  
Jessica ([USDA.GOV](mailto:USDA.GOV) [[usda.gov](mailto:usda.gov)]);  
DC; [danny.shiau@usuhs.edu](mailto:danny.shiau@usuhs.edu);  
Cordts, Jerome (CTR); Schnitzer,  
Jay J; Ignacio, Joselito; Will  
Gaskins; CHRISTOPHER ALLEN;  
Kevin Montgomery; Logan, Linda  
L; LLogandakar

**Subject:** Re: Red Dawn Raging  
Start March 4

“our communities” and “eyewall” - I  
hate autocorrect

It is good - people need to have  
analogies they can relate to. They  
also need analogies that motivate  
action and help them understand  
that THEY must take action.  
Government won't save you from a

Cat 5 storm, but through our actions we can prevent it from being that. The virus is coming to your community but what it does is up to us.

Sent from my iPhone

On 12 Mar 2020, at 04:34,  
Parker Jr, Gerald W  
<[gparker@cvm.tamu.edu](mailto:gparker@cvm.tamu.edu)>  
wrote:

Richard, thanks. I am trying to think of something that Texans can understand. You would not believe the vitriol locally in the Houston area now that the Houston Rodeo was cancelled. It was a courageous but correct decision. I have an interview with Houston Chronicle tomorrow and may use that analogy. I will also strongly support that local decision.

Get [Outlook for iOS](#)

**From:** Richard Hatchett  
<[richard.hatchett@cepi.net](mailto:richard.hatchett@cepi.net)>

**Sent:** Wednesday, March 11, 2020 11:27 PM

**To:** Parker Jr, Gerald W

**Cc:** Tom Bossert; Carter Mecher; Dr. Eva K Lee; Gruber, David (DSHS); Dr. Eva Lee; McDonald, Eric; Borio, Luciana; Brian Benson; Lawler, James V; Tracey McNamara; Duane Caneva; Baric, Ralph S; Mecher, Carter ([VA.GOV](http://VA.GOV))

[va.gov]); Hunt, Richard  
(OS/ASPR/EMMO);  
WILKINSON, THOMAS;  
M.D.; David; Charity  
A@CDPH; Gregory J;  
Walters, William  
(STATE.GOV [state.gov]);  
HAMILTON, CAMERON;

Dodgen, Daniel  
(OS/ASPR/SPPR);  
DeBord, Kristin  
(OS/ASPR/SPPR); Phillips,  
Sally (OS/ASPR/SPPR);  
Matthew J CIV USARMY  
(USA); Lisa Koonin;  
HARVEY, MELISSA;  
WOLFE, HERBERT;  
Eastman, Alexander;  
EVANS, MARIEFRED;  
[jwleduc@utmb.edu](mailto:jwleduc@utmb.edu); Johnson,  
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Yeskey, Kevin; Disbrow,  
Gary (OS/ASPR/BARDA);  
Redd, John  
(OS/ASPR/SPPR); Hassell,  
David (Chris) (OS/ASPR/IO);  
Hamel, Joseph  
(OS/ASPR/IO); Hanfling,  
Dan; Wade, David;  
TARANTINO, DAVID A;  
KAUSHIK, SANGEETA;  
Lee, Scott  
(OS/ASPR/EMMO); Larry  
G; Ryan Morhard; Steven  
Jt(tCHFStDPH ); Adams,  
Jerome (HHS/OASH);  
Mansoura, Monique K.;  
Fantinato, Jessica  
(USDA.GOV [usda.gov]);  
DC; [danny.shiau@usuhs.edu](mailto:danny.shiau@usuhs.edu);  
Cordts, Jerome (CTR);  
Schnitzer, Jay J; Ignacio,  
Joselito; Will Gaskins;  
CHRISTOPHER ALLEN;  
Kevin Montgomery; Logan,  
Linda L; LLogandakar

**Subject:** Re: Red Dawn  
Raging Start March 4

Gerry - I thought yesterday  
about the incoming hurricane  
analogy as well and think it is

a good one. This is a Cat 5 threat to safety that is coming too Jr. communities and fast, and we can either prepare and do the epidemic equivalent of evacuate to safer ground (i.e., TLC/CMG) or take our chances. It's a lot harder to evacuate when the winds are above 100 miles an hour on their way up to 190 at the eyeball.

Sent from my iPhone

On 12 Mar 2020, at 04:16, Parker Jr, Gerald W  
<[gjparker@cvm.tamu.edu](mailto:gjparker@cvm.tamu.edu)> wrote:

I do not see it. No use now. I saw it for China. But not now. We should focus on targeted, layered community mitigation measures. Maybe we could use a hurricane analogy that many understand. COVID19 is like a storm coming to our communities, but rather than evacuation or shelter in place orders, the analogous move is community mitigation. At this stage they must be aggressive because we do not have the time luxury of a hurricane in the Atlantic.

Get [Outlook for iOS](#)

**From:** Tom Bossert

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>

**Sent:** Wednesday,  
March 11, 2020 23:05

**To:** Carter Mecher

**Cc:** Dr. Eva K Lee;  
Richard Hatchett;  
Gruber,David (DSHS);  
Dr. Eva Lee;  
McDonald, Eric; Borio,  
Luciana; Brian Benson;  
Lawler, James V;  
Tracey McNamara;  
Duane Caneva; Baric,  
Ralph S; Mecher,  
Carter ([VAGOV](mailto:VAGOV@va.gov)  
[\[va.gov\]](mailto:va.gov)); Hunt,  
Richard  
(OS/ASPR/EMMO);  
WILKINSON,  
THOMAS; M.D.;  
David; Charity  
A@CDPH; Gregory J;  
Walters, William  
([STATE.GOV](mailto:STATE.GOV@state.gov)  
[\[state.gov\]](mailto:state.gov));  
HAMILTON,  
CAMERON;

Dodgen, Daniel  
(OS/ASPR/SPPR);  
DeBord,Kristin  
(OS/ASPR/SPPR);  
Phillips, Sally  
(OS/ASPR/SPPR);  
Matthew J CIV  
USARMY (USA); Lisa  
Koonin; HARVEY,  
MELISSA; WOLFE,  
HERBERT; Eastman,  
Alexander; EVANS,  
MARIEFRED;  
[jwleduc@utmb.edu](mailto:jwleduc@utmb.edu);  
Johnson, Robert  
(OS/ASPR/BARDA);  
Yeskey, Kevin;  
Disbrow, Gary  
(OS/ASPR/BARDA);  
Redd, John  
(OS/ASPR/SPPR);  
Hassell, David (Chris)  
(OS/ASPR/IO); Hamel,  
Joseph (OS/ASPR/IO);  
Hanfling, Dan; Wade,

David; TARANTINO,  
DAVID A; KAUSHIK,  
SANGEETA; Lee,  
Scott  
(OS/ASPR/EMMO);  
Larry G; Ryan  
Morhard; Steven  
Jt(tCHFStDPH );  
Adams, Jerome  
(HHS/OASH);  
Mansoura, Monique  
K.; Fantinato, Jessica  
([USDA.GOV](https://www.usda.gov)  
[\[usda.gov\]](https://www.usda.gov)); DC;  
[danny.shiau@usuhs.edu](mailto:danny.shiau@usuhs.edu)  
; Cordts, Jerome  
(CTR); Schnitzer, Jay  
J; Ignacio, Joselito;  
Will Gaskins;  
CHRISTOPHER  
ALLEN; Kevin  
Montgomery; Parker  
Jr, Gerald W; Logan,  
Linda L; LLogandakar

**Subject:** Re: Red  
Dawn Raging Start  
March 4

Can anyone justify the  
European travel  
restriction,  
scientifically?  
Seriously, is there any  
benefit? I don't see it,  
but I'm hoping there is  
something I don't  
know.

-Tom

On Mar 11,  
2020, at 10:51  
PM, Carter  
Mecher  
<[cmecher@chart](mailto:cmecher@chart.com)  
[er.net](mailto:cmecher@chart.com)> wrote:

The US map  
starting to fill in.

[\[nytimes.com\]](https://www.nytimes.com)http  
[ps://www.nytime](https://www.nytimes.com)

Comparison of France, Spain, UK, Germany, US and Italy. Added in the population and dates of first case and first death.

The US is about 2 days behind France and Spain. France and Spain are about 8-9 days behind Italy. I would describe the growth in France, Spain and the US as explosive. Looks to me like we are going to experience an unmitigated Wuhan.

Two weeks from now, what will we wished we had done? I'm going to put that question in a little time capsule, and ask you two weeks from but rephrase it looking back.

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| Date of 1st Case |  |
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| Date of 1st Death |  |
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| 9-Feb             |  |

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| 9-Mar |  |

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| 10-Mar |  |
| 11-Mar |  |

Sent from Mail for Windows 10

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**From:** Tom Bossert

**Sent:** Wednesday, March 11, 2020 10:05 PM

**To:** Dr. Eva K Lee

**Cc:** Richard Hatchett; Gruber, David (DSHS); Dr. Eva Lee; McDonald, Eric; Borio, Luciana; Brian Benson; Lawler, James V; Tracey McNamara; Duane Caneva; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON; Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Hanfling, Dan; Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH); Adams, Jerome (HHS/OASH); Mansoura, Monique K.; Fantinato, Jessica (USDA.GOV); DC; danny.shiau@usuhs.edu; Cordts, Jerome (CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; CHRISTOPHER ALLEN; Kevin Montgomery; Parker Jr, Gerald W; Logan, Linda L; LLogandakar

**Subject:** Re: Red Dawn Raging Start March 4

Well, I give the president credit for changing his tone and making Americans know this is very serious. By all other metrics, it was a combination of gibberish, unnecessary steps, and insufficient detail. We still have a lot of work ahead of us team.

-Tom

On Mar  
11, 2020,

at 2:47  
PM, Dr.  
Eva K Lee  
<[evalee-  
gatech@p  
m.me](mailto:evalee-gatech@p<br/>m.me)>  
wrote:

Three  
notes:  
[[It's about  
winning  
time.]]

**1. Here's  
German  
Chancellor  
Angela  
Merkel's  
comments**

. My  
German  
advisor is  
the  
scientific  
advisor to  
Angela. He  
told me  
Angela  
loves  
mathemati  
cs and can  
understand  
all my  
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graphs  
very well.  
Here's her  
comment:

“The  
process  
has to be  
focused on  
not  
overburde  
ning the  
health  
system by  
slowing  
the virus’s  
spread ...  
It’s about  
winning  
time,”

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merkel-  
warns-that-  
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She's  
already  
been  
criticized  
for not  
acting /  
speaking in  
public. But  
Germany  
was able to  
hold out  
very well  
until Italy's  
fire  
spreads to  
every  
country in  
Europe.

**2. DC**  
**colleagues**  
**: Please**  
**tele-work,**  
please  
protect  
yourself  
and thus  
protect the  
governmen  
t business  
continuity.  
Remember  
one case is  
one too  
many --  
because

there're all  
the other  
hidden  
cases you  
won't see.  
David M's  
asked to  
analyze  
Baltimore  
with not-  
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case  
scenario,  
That is a  
good  
model  
system to  
view. It  
can be  
applied to  
all cities.  
You can  
see the  
benefits of  
tele-work  
even if  
only 50%  
participate.  
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and these  
individuals



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that  
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and carried  
with them  
to their  
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I have tons  
of graphs  
and some  
specific to  
DC. I will  
add them  
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send them.

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Re: Red  
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**From:** [Carter Mecher](#)

**Sent:** Tuesday, March 10, 2020 10:30 AM

**To:** [Gruber,David \(DSHS\)](#); [Dr. Eva Lee](#); [McDonald, Eric](#)

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**Subject:** RE: Red Dawn Raging Start March 4

Back in 2007, there was modeling for estimating the economic impact of a pandemic (unmitigated with no NPIs) and a mitigated pandemic plus the costs of NPIs. I can see if I can dig that up. The bottom line is that when you add in the cost associated with lives lost in an unmitigated pandemic, additional healthcare costs due to greater numbers of those who are ill and hospitalized, economic costs due to lost productivity due to increased illness, the NPI costs pale in comparison I will see what additional info I can find to help you.

I'm listening to the arguments for not closing schools: (1) kids may not be important in disease transmission and when kids do become infected, their illness is mild; (2) closing schools is too disruptive, it will require parents to stay home from work to mind their children (and this absenteeism could adversely impact critical sectors such as healthcare); (3) large number of kids depend upon school meals and the closure of schools could have serious consequences; (4) by keeping kids home, they have more time to be around older adults in the household and potentially transmit disease to more vulnerable groups (the thinking is that it would be safer to keep them at school for at least 8 hrs of the day to decrease contact time with older adults in the household); and (5) kids will just mix again the community (that kids will "hang out at malls").

Just something to think about.

Schools are closing now for 1 week for spring break (many this week and some in the next week or two). This is happening at a critical point of the acceleration of this outbreak in the US. In the next couple of weeks our healthcare system is likely to be stressed. A good number of parents take time off over spring break to be with their kids (many times both parents for two parent households). Below is a graph of annual leave usage rates in VA It is very consistent from year to year (looks a lot like an EKG tracing. You see a spike at Thanksgiving, another huge spike round Christmas/New Years, another small bump in the spring (spring break), and another broad bump (that looks like a T wave on an EKG) in the summer months when families tend to take vacations (because kids are out of school).

Given the argument of those opposed to closing schools, should we cancel spring break and keep the schools open so that parents don't have to stay home to mind their kids at this particularly vulnerable time when our healthcare system is about to be hammered? Should we also keep the schools open so that kids are kept away from older adults in the household for much of the day during this period of acceleration? That is pretty much the extension of illogical logic.

We close schools for 1 week for spring break and the world does not fall apart. The nutrition of children does not suffer. Do we think if schools closed for two weeks, that the world would come crashing down? Why not close for two weeks and then reassess (at least it gives us time). We can never get that time back.

Last thing. Many of you have kids, do any of them hang out at malls? In my neighborhood I don't even see kids outside—they are all inside texting, on Instagram, playing games with their friends online or whatever they do these days. Hardly see them riding their bikes around. I understand that “going to the mall” is code for kids re-congregating outside of school. Even if they do they are in a less socially dense environment and in much smaller groups. The whole school doesn't all go together anywhere, except to school.

Sent from [Mail](#) for Windows 10

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**From:** [Gruber, David \(DSHS\)](#)

**Sent:** Tuesday, March 10, 2020 9:58 AM

**To:** [Dr. Eva Lee](#); [McDonald, Eric](#)

**Cc:** [Carter Mecher](#); [Borio, Luciana](#); [Brian Benson](#); [Lawler, James V](#); [Tracey McNamara](#); [Duane Caneva](#); [Dr. Eva K Lee](#); [Tom Bossert](#); [Baric, Ralph S](#); [Mecher, Carter \(VA.GOV\)](#); [Hunt, Richard \(OS/ASPR/EMMO\)](#); [Richard Hatchett](#); [WILKINSON, THOMAS; M.D.](#); [David](#); [Charity A@CDPH](#); [Gregory J](#); [Walters, William \(STATE.GOV\)](#); [HAMILTON, CAMERON](#); [Dodgen, Daniel \(OS/ASPR/SPPR\)](#); [DeBord, Kristin \(OS/ASPR/SPPR\)](#); [Phillips, Sally \(OS/ASPR/SPPR\)](#); [Matthew J CIV USARMY \(USA\)](#); [Lisa Koonin](#); [HARVEY, MELISSA](#); [WOLFE, HERBERT](#); [Eastman, Alexander](#); [EVANS, MARIEFRED](#); [jwleduc@utmb.edu](#); [Johnson, Robert \(OS/ASPR/BARDA\)](#); [Yeskey, Kevin](#); [Disbrow, Gary \(OS/ASPR/BARDA\)](#); [Redd, John \(OS/ASPR/SPPR\)](#); [Hassell, David \(Chris\) \(OS/ASPR/IO\)](#); [Hamel, Joseph \(OS/ASPR/IO\)](#); [Hanfling, Dan](#); [Wade, David](#); [TARANTINO, DAVID A](#); [KAUSHIK, SANGEETA](#); [Lee, Scott \(OS/ASPR/EMMO\)](#); [Larry G](#); [Ryan Morhard](#); [Steven Jt\(tCHFStDPH\)](#); [Adams, Jerome \(HHS/OASH\)](#); [Mansoura, Monique K.](#); [Fantinato, Jessica \(USDA.GOV\)](#); [DC](#); [danny.shiau@usuhs.edu](#); [Cordts, Jerome \(CTR\)](#); [Schnitzer, Jay J](#); [Ignacio, Joselito](#); [Will Gaskins](#); [CHRISTOPHER ALLEN](#); [Kevin Montgomery](#); [Parker Jr, Gerald W](#); [Logan, Linda L](#); [LLogandakar](#)

**Subject:** RE: Red Dawn Raging Start March 4

As a state public health official who is in agreement that NPIs must be strongly enacted early; I'm looking for help from this group to find tools that make the case for NPIs. The target audience is those outside of health.

I'm attaching an example slide (admittedly and intentionally rudimentary) that might be used to support this argument and explain the totality of NPIs. Do others see this as something that might aid in influencing and, if so, are there data sources that I might tap into showing the

impacts of NPIs directly on epi curves and how these NPIs would impact other community foundations?

Thanks  
Dave

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**From:** Dr. Eva Lee <[eva.evalee.lee64@gmail.com](mailto:eva.evalee.lee64@gmail.com)>

**Sent:** Saturday, March 7, 2020 8:53 PM

**To:** McDonald, Eric <[Eric.McDonald@sdcounty.ca.gov](mailto:Eric.McDonald@sdcounty.ca.gov)>

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**Subject:** Re: Red Dawn Raging Start March 4

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>WARNING:</b> This email is from outside the HHS system Do not click on links or attachments unless you expect them from the sender and know the content is safe.</p> |
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I assume the WHO test kit protocol used by other parts of the world won't be used by US (or accepted by FDA/CDC). Yes, we have talked about testing bottleneck since January. Can't say more.

This may be of interest from BBC.

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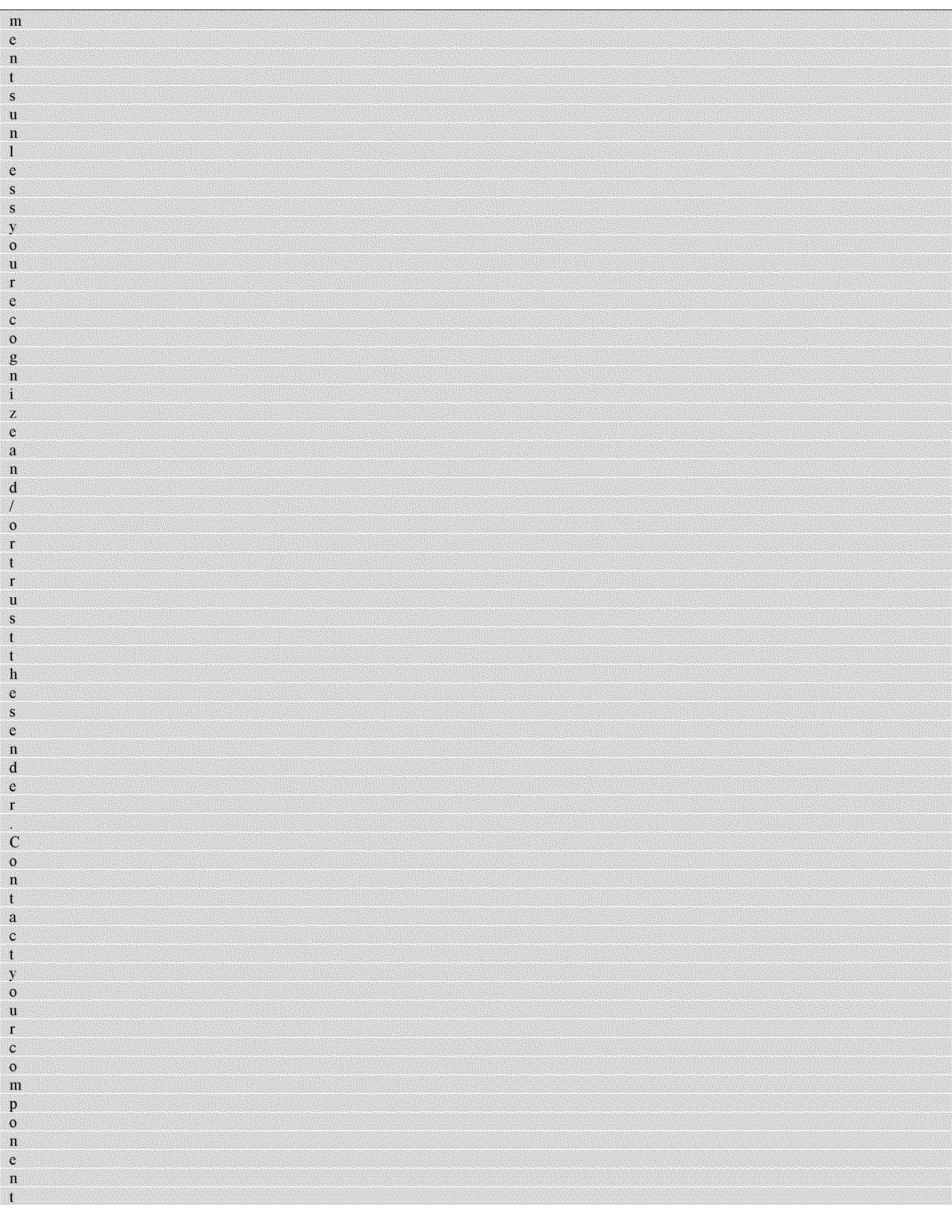
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home with children it causes significant impacts on the healthcare system and other institutions that are essential for our  
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simulation.  
Modify the rules and the pattern of change.  
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We all know that the complex systems that we are

exquisite dependency upon initiation conditions and those we will be different in each community

unity.  
Modelers have done one just this (Bob Glass in particular).  
They have learned what rule

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erules (or exclude one altogether) and pull the trigger against different rent points in the output  
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Michael, James

and Duane,  
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outbreaks of the new coronavirus have been confirmed. A total of 696 passengers and occupants

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On January 1, the cruise ship Diamond Princess, which was confirmed



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of Health, Labor and Welfare, in addition to this 696 people, there is one crew member who

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**To:** Mecher, Carter[Carter.Mecher@va.gov]; Tom Carter Dr. Eva K Lawler, James V[james.lawler@unmc.edu]; Parker Jr, Gerald W[gparker@cvm.tamu.edu]; Hanfling, Dan[DHanfling@iq.t.org]; Gruber,David (DSHS)[David.Gruber@dshs.texas.gov]; Dr. Eva CHRISTOPHER

McDonald, Eric[Eric.McDonald@sdcounty.ca.gov]; Borio, Tracey McNamara[tmcNamara@westernu.edu]; Baric, Ralph S[rbaric@email.unc.edu]; Hunt, Richard (OS/ASPR/EMMO)[Richard.Hunt@hhs.gov]; WILKINSON, THOMAS[THOMAS.WILKINSON@hq.dhs.gov]; M.D.[MVCALLAHAN@mgh.harvard.edu]; David[DMarcozzi@som.umaryland.edu]; Charity A@CDPH[Charity.Dean@cdph.ca.gov]; Gregory J[MartinGJ@state.gov]; Walters, William (STATE.GOV)[walterswa2@state.gov]; HAMILTON, CAMERON[cameron.hamilton@hq.dhs.gov]; Dodgen,tDanielt(OS/ASPR/SPPR)[daniel.dodgen@hhs.gov]; DeBord,Kristin (OS/ASPR/SPPR)[Kristin.DeBord@hhs.gov]; Phillips, Sally (OS/ASPR/SPPR)[Sally.Phillips@hhs.gov]; Matthew J CIV USARMY (USA)[matthew.j.hepburn.civ@mail.mil]; Lisa Koonin[lkoonin1@hhs.gov]; HARVEY, MELISSA[melissa.harvey@hq.dhs.gov]; WOLFE, HERBERT[HERBERT.WOLFE@hq.dhs.gov]; Eastman, Alexander[alexander.eastman@hq.dhs.gov]; EVANS, MARIEFRED[mariefred.evans@associates.hq.dhs.gov]; jwleduc@utmb.edu[jwleduc@utmb.edu]; Johnson, Robert (OS/ASPR/BARDA)[Robert.Johnson@hhs.gov]; Yeskey, Kevin[kevin.yeskey@hhs.gov]; Disbrow, Gary (OS/ASPR/BARDA)[Gary.Disbrow@hhs.gov]; Redd, John (OS/ASPR/SPPR)[John.Redd@hhs.gov]; Hassell, David (Chris) (OS/ASPR/IO)[David.Hassell@hhs.gov]; Hamel, Joseph (OS/ASPR/IO)[Joseph.Hamel@hhs.gov]; Wade, David[david.wade@hq.dhs.gov]; TARANTINO, DAVID A[david.a.tarantino@cbp.dhs.gov]; KAUSHIK, SANGEETA[sangeeta.kaushik@hq.dhs.gov]; Lee, Scott (OS/ASPR/EMMO)[Scott.Lee@hhs.gov]; Larry G[PadgetLG@state.gov]; Ryan Morhard[Ryan.Morhard@weforum.org]; Steven Jt(tCHFStDPH )[steven.stack@ky.gov]; Adams, Jerome (HHS/OASH)[Jerome.Adams@hhs.gov]; Mansoura, Monique K.[mmansoura@mitre.org]; Fantinato, Jessica (USDA.GOV)[jessica.fantinato@usda.gov]; DC[michelle.colby@usda.gov]; danny.shiau@usuhs.edu[danny.shiau@usuhs.edu]; Cordts, Jerome (CTR)[jerome.cordts@associates.hq.dhs.gov]; Schnitzer, Jay J.[jschnitzer@mitre.org]; Ignacio, Joselito[joselito.ignacio@fema.dhs.gov]; Will Gaskins[will.gaskins@efiia.com]; Kevin Montgomery[kevin@collaborate.org]; Logan, Linda L[llogan@cvm.tamu.edu]; Venkayya, Rajeev[rajeev.venkayya@takeda.com]; 'Richard William Lang[jwlang@worldclinic.com]; rdarling@patronusmedical.com[rdarling@patronusmedical.com]; Ronny

**From:** Caneva, Duane[duane.caneva@hq.dhs.gov]  
**Sent:** Mon 3/16/2020 7:54:31 AM (UTC-04:00)  
**Subject:** RE: [EXTERNAL] Re: Red Dawn Raging Start March 4

Sorry for spam.  
Housecleaning. Let me know if you want your name removed.

---

**From:** Mecher, Carter <Carter.Mecher@va.gov>  
**Sent:** Monday, March 16, 2020 5:42 AM  
**To:** Tom Bossert Richard Hatchett <richard.hatchett@cepi.net>  
**Cc: Subject:** RE: [EXTERNAL] Re: Red Dawn Raging Start March 4

It doesn't matter. Anyone with common sense (governors) as well as the public will interpret this to practically mean school closure. That CDC would not want 50 people being together for even an hour while hundreds or thousands of kids could be together for 8 hours defies common sense. Imagine CDC getting on TV and trying to explain. Good luck with that.

Sent with BlackBerry Work  
(www.blackberry.com)

---

**From:** Tom Bossert \_\_\_\_\_  
**Date:** Monday, Mar 16, 2020, 12:32 AM  
**To:** Richard Hatchett <richard.hatchett@cepi.net>  
**Cc:** Carter Mecher Dr. Eva K Lee Lawler, James V <james.lawler@unmc.edu>, Parker Jr, Gerald W <gparker@cvm.tamu.edu>, Caneva, Duane <duane.caneva@hq.dhs.gov>, Hanfling, Dan <Dhanfling@iq.t.org>, Gruber,David (DSHS) <David.Gruber@dshs.texas.gov>, Dr. Eva Lee \_\_\_\_\_  
CHRISTOPHER ALLEN <chrisallen@hhs.gov> McDonald, Eric  
<Eric.McDonald@sdcounty.ca.gov>, Borio, Luciana <LBorio@iq.t.org>, Brian Benson Tracey McNamara <tmcNamara@westernu.edu>, Baric, Ralph S <rbaric@email.unc.edu>, Mecher, Carter <Carter.Mecher@va.gov>, Hunt, Richard (OS/ASPR/EMMO) <Richard.Hunt@hhs.gov>, WILKINSON, THOMAS <THOMAS.WILKINSON@hq.dhs.gov>, M.D. <MVCALLAHAN@mgh.harvard.edu>, David <DMarcozzi@som.umaryland.edu>, Charity A@CDPH <Charity.Dean@cdph.ca.gov>, Gregory J <MartinGJ@state.gov>, Walters, William (STATE.GOV) <walterswa2@state.gov>, HAMILTON, CAMERON <cameron.hamilton@hq.dhs.gov>, Dodgen,tDanielt(OS/ASPR/SPPR) <daniel.dodgen@hhs.gov>, DeBord,Kristin (OS/ASPR/SPPR)

<Kristin.DeBord@hhs.gov>, Phillips, Sally (OS/ASPR/SPPR) <Sally.Phillips@hhs.gov>, Matthew J CIV USARMY (USA) <matthew.j.hepburn.civ@mail.mil>, Lisa Koonin <lkoonin1@hhs.gov>, HARVEY, MELISSA <melissa.harvey@hq.dhs.gov>, WOLFE, HERBERT <HERBERT.WOLFE@hq.dhs.gov>, Eastman, Alexander <alexander.eastman@hq.dhs.gov>, EVANS, MARIEFRED <mariefred.evans@associates.hq.dhs.gov>, jwleduc@utmb.edu <jwleduc@utmb.edu>, Johnson, Robert (OS/ASPR/BARDA) <Robert.Johnson@hhs.gov>, Yeskey, Kevin <kevin.yeskey@hhs.gov>, Disbrow, Gary (OS/ASPR/BARDA) <Gary.Disbrow@hhs.gov>, Redd, John (OS/ASPR/SPPR) <John.Redd@hhs.gov>, Hassell, David (Chris) (OS/ASPR/IO) <David.Hassell@hhs.gov>, Hamel, Joseph (OS/ASPR/IO) <Joseph.Hamel@hhs.gov>, Wade, David <david.wade@hq.dhs.gov>, TARANTINO, DAVID A <david.a.tarantino@cbp.dhs.gov>, KAUSHIK, SANGEETA <sangeeta.kaushik@hq.dhs.gov>, Lee, Scott (OS/ASPR/EMMO) <Scott.Lee@hhs.gov>, Larry G <PadgetLG@state.gov>, Ryan Morhard <Ryan.Morhard@weforum.org>, Steven Jt(tCHFStDPH) <steven.stack@ky.gov>, Adams, Jerome (HHS/OASH) <Jerome.Adams@hhs.gov>, Mansoura, Monique K. <mmansoura@mitre.org>, Fantinato, Jessica (USDA.GOV) <jessica.fantinato@usda.gov>, DC <michelle.colby@usda.gov>, danny.shiau@usuhs.edu <danny.shiau@usuhs.edu>, Cordts, Jerome (CTR) <jerome.cordts@associates.hq.dhs.gov>, Schnitzer, Jay J. <jschnitzer@mitre.org>, Ignacio, Joselito <joselito.ignacio@fema.dhs.gov>, Will Gaskins <will.gaskins@efii.com>, Kevin Montgomery <kevin@collaborate.org>, Logan, Linda L <llogan@cvm.tamu.edu>, LLogandakar Venkayya, Rajeev <rajeev.venkayya@takeda.com>

**Subject:** [EXTERNAL] Re: Red Dawn Raging Start March 4

No, it expressly excludes them, frustratingly:

CDC guidance as of 3/15/2020

Large events and mass gatherings can contribute to the spread of COVID-19 in the United States via travelers who attend these events and introduce the virus to new communities. Examples of large events and mass gatherings include conferences, festivals, parades, concerts, sporting events, weddings, and other types of assemblies. These events can be planned not only by organizations and communities but also by individuals.

Therefore, CDC, in accordance with its guidance for large events and mass gatherings, recommends that for the next 8 weeks, organizers (whether groups or individuals) cancel or postpone in-person events that consist of 50 people or more throughout the United States.

Events of any size should only be continued if they can be carried out with adherence to guidelines for protecting vulnerable populations, hand hygiene, and social distancing. When feasible, organizers could modify events to be virtual.

This recommendation does not apply to the day to day operation of organizations such as schools, institutes of higher learning, or businesses. This recommendation is made in an attempt to reduce introduction of the virus into new communities and to slow the spread of infection in communities already affected by the virus. This recommendation is not intended to supersede the advice of local public health officials.

-Tom

On Mar 16, 2020, at 12:01 AM, Richard Hatchett <richard.hatchett@cepi.net> wrote:

Does that include schools?

Sent from my iPhone

On 16 Mar 2020, at 00:32, Carter Mecher wrote:

CDC now recommends that, for the next 8 weeks, events with more than 50 people are canceled throughout the U.S.

<A81F4842CAAA4B60AB38AA1790253913.png>

Sent from Mail for Windows 10

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**From:** Dr. Eva K Lee

**Sent:** Sunday, March 15, 2020 4:46 PM

**To:** Tom Bossert

**Cc:** \_\_\_\_\_ Lawler, James V; Parker Jr, Gerald W; \_\_\_\_\_ Caneva, Duane; Hanfling, Dan; Gruber, David (DSHS); Dr. Eva Lee; CHRISTOPHER ALLEN; \_\_\_\_\_ Richard Hatchett; McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Baric, Ralph S; Mecher,

Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON; Dodgen,tDanielt(OS/ASPR/SPPR); DeBord,Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH ); Adams, Jerome (HHS/OASH); Mansoura, Monique K.; Fantinato, Jessica (USDA.GOV); DC; danny.shiau@usuhs.edu; Cordts, Jerome (CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; Kevin Montgomery; Logan, Linda L; LLogandakar; rajeev.venkayya@takeda.com

**Subject:** Re: Red Dawn Raging Start March 4

Thank you. The total infection and death outside China now surpass those of China's infection and deaths.

<https://newton.isye.gatech.edu/DrLee/>  
mobile:

Sent with ProtonMail Secure Email.

----- Original Message -----

On Sunday, March 15, 2020 4:23 PM, Tom Bossert

wrote:

I just posted another piece. Nothing new in it to this team, but it reflects my view of the situation.

<https://abcnews.go.com/Health/coronavirus-paradox-lowest-point-finest-hour-opinion/story?id=69602027>

-Tom

On Mar 14, 2020, at 3:55 PM,

wrote:

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**Vincent Covello shared Q&As he developed with ASTHO on COVID/**

<https://www.astho.org/COVID-19/Q-and-A/>

**He uses a technique called message maps. He has a rule 3/9/27--convey 3 points, in 9 seconds, and 27 words. Perfect size for the media.**

**Might be useful for those of you from state and local public health as well as from healthcare systems.**

**From:** Vincent Covello

**Date:** Saturday, Mar 14, 2020, 10:14 AM

**To:** Mecher, Carter <Carter.Mecher@va.gov>

**Subject:** [EXTERNAL] Follow up: COVID-19 document

Hi Carter,

I have provided below the url for a COVID-19 document that I co-authored and that was published today by ASTHO on their website.

The document contains message maps for questions addressed to US State and Territorial Health Directors. This first batch of

45+ questions came directly last week from the Health Directors.

I co-authored a similar document on ZIKA for ASTHO a few years ago. My understanding is ASTHO received a surge of download requests for the ZIKA document on the first day of publication. Many of the requests came from reporters. They liked the short and long answer format of the message map.

As you might imagine, the contents of the document will be a moving target. The questions and the mapped answers will be updated frequently. For example, we have at least ten new questions based on the events of just the last few days.

Please feel free to share this document with others. I and my team members would also greatly welcome your comments or suggestions.

Best regards,

Vincent

Dr. Vincent Covello  
Director  
Center for Risk Communication  
Tel.:                      Email:

<https://www.astho.org/COVID-19/Q-and-A/>

-----  
From: "Dr. Eva K Lee"  
To: James V"  
Cc: "Carter Mecher", Gerald W", Duane", "Tom Bossert", Dan", David (DSHS)", "Dr. Eva Lee", "CHRISTOPHER ALLEN", "Richard Hatchett", Eric", Luciana", "Brian Benson", "Tracey McNamara", Ralph S", Carter (VA.GOV)", Richard (OS/ASPR/EMMO)", THOMAS", "M.D.", "David", "Charity A@CDPH", "Gregory J", William (STATE.GOV)", CAMERON", tDanielt(OS/ASPR/SPPR)", Kristin (OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", "Matthew J CIV USARMY (USA)", "Lisa Koonin", MELISSA", HERBERT", Alexander", MARIEFRED", "jwleduc@utmb.edu", Robert (OS/ASPR/BARDA)", Kevin", Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", David (Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", David", DAVID A", SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", "Ryan Morhard", "Steven Jt(tCHFStDPH)", Jerome (HHS/OASH)", Monique K.", Jessica (USDA.GOV)", "DC", "danny.shiau@usuhs.edu", Jerome (CTR)", Jay J", Joselito", "Will Gaskins", "Kevin Montgomery", Linda L", "LLogandakar", "rajeev.venkayya@takeda.com"  
Sent: Saturday March 14 2020 12:44:37PM  
Subject: Re: Red Dawn Raging Start March 4

This is so very sad, yes, everything we talked about and everything we have

anticipated. Yes, you can see from the curves in the graphs when they have the first confirmed death, they're **at least 2 weeks behind**. I don't understand the screening at the airport, not even a little advice on self-quarantine coming in from any countries. Yes, children will die too if they have no support in the hospitals. There are many with co-existing conditions. Beds are critical. That is all I am counting (when we have one bed, we need everything that goes with it in the support). Healthcare workers and anyone in service to assist this covid-19 operations must stay healthy. But of course we know they will be quarantined at some stage. I know people may think school closure is over-reacting. It isn't if you think about the inter-dependencies. **You can imagine a million different scenarios. Just a simply one** -- a little child got infected from school. He came home and infected his mother who was a nurse. The nurse went to work without any noticeable symptoms, and she infected the ICU patients that she cared for. Ok, this is one case -- and again -- one case is ALL we need to worry about. The cascading effect -- we don't want to even think about.

But as a country, we must fight for everyone and every state. I truly believe and in my calculations, those states that took the pre-emptive steps -- they are going to have the resources to contain their own infection and at some point, can help those states in needs. Here we go about sending patients around -- not 7 -- but many -- when we must lend the help when needed (and if we could do so at all). Now, everyone is fighting their local fire, and it's already quite stressful for everyone. I don't even know if anyone has extra resources. It is really resource-intense. Can you imagine -- India, and the African countries start to pick up? It frightens me. Hence pre-emptive is a must.

<https://newton.isye.gatech.edu/DrLee/>  
mobile:

Sent with [ProtonMail](#) Secure Email.

----- Original Message -----

On Saturday, March 14, 2020 10:25 AM, Lawler, James V  
<james.lawler@unmc.edu> wrote:

From a friend of a med school classmate on Facebook (so caveat as you will)

"MT: So if you're not here in Kirkland Washington, let me give you an update on our not so little town.

Our local hospital, Evergreen, one of the top-ranked hospitals in the country and literally at ground zero in the fight against Coronavirus has run out of beds as of today. The staff is exhausted, demoralized, and supplies are running low.

Because so many staff members are sick, and the operational tempo is so high, medical staff told to be in quarantine due to

exposure, but not showing symptoms have been summoned back to work. So far 65 patients have entered the hospital positive for COVID-19, 15 didn't leave alive (as of 3/10).

Tom Douglas, multiple James Beard Award winner is closing down 12 of his 13 restaurants (only leaving one open because of a contract with a hotel) because business is down 90%.

Boeing, which was a hot mess with the 737-MAX issue, to begin with, is now losing more orders than it is getting as the airline industry braces for a 70% reduction in air travel. At the basement of 9/11, global air travel was off 40%.

Norwegian Cruiselines, headquartered in Seattle, has been called out for lying to customers about the safety of their ships, their capacity to protect passengers and making it difficult to cancel or reschedule trips.

Starbucks has announced they will be limited seating in their stores and ones with drive-thru will go drive-thru only.

The Seattle Mariners have moved their home openers out of the area, for now, my guess is the MLB will follow every other sports league and suspend the start of baseball.

Our school district has suspended classes until March 27, but my guess is it will go longer. Issaquah, a town nearby has suspended classes until April 24.

I was in our nearest grocery store, which is a flagship "Fred Meyer" store (Kroger corp) and all of the staples aisles were close to empty. Beans, rice, flour, pasta. Beans about wiped out, the only rice I could find was a 5-pound bag in the Asian section. Only the high-end "boutique" pasta and a few more complex dish pasta like lasagna noodles. The Jewish section had some noodles in it, and the Asian section still had some ramen.

There is no traffic. There is an eerie quiet in the air, and although the videos of people racing in Costco are entertaining, I have not seen anyone running in a store to the TP, fights over food, or other resources. There is this strange calm, but I always remind myself that history has shown we are three hot meals and a warm bed away from wanting to kill each other.

My wife has shared some other stories from her work - nothing sinister or ominous but nothing I can share and nothing that even if I could, I feel ready to share.

We no longer hear about Life Care Center. The federal government finally showed up there and now all news has stopped. The 70+ employees who are all in various states of being sick are still not tested - that we know. One-third of our town fire department is now in quarantine. If there is anything that gives me the creeps it is this. The government showed up and the news stopped.

When we returned from our trip to Africa on 2/26 and went through Customs in Seattle, there was no screening, no

questions, no testing, no sorting of passengers. Nothing. Welcome back, stamp of the passport, done. The lines weren't long and the lack of any form of screening at this Asian gateway was disconcerting. It paled in comparison to the strict protocols we went through in Windhoek and Johannesburg, and the announcements and questions in Frankfurt. What we didn't know at that time is from 2/19 to 2/25, 12 patients had died at Life Care Center for unknown reasons, and the first COVID-19 death was on 2/26.

The response to the threat at a federal level was non-existent.

My opinion.

The Seattle area is about two weeks ahead of most of the United States. For those going this is just hype and this is just the flu, come fly here and see for yourself. I mean flights are cheap and planes are empty. Can even offer you a place to sleep.(no not really, but Kirkland has plenty of hotels)

The Seattle area is probably 2 to 3 weeks behind Iran or Italy at this point. The tidal wave is coming, I believe most in the general public are just in denial about it at this point.

In Italy Coronavirus is killing young and old alike because once you run out of beds, once you run out of breathing machines, Coronavirus becomes an equal opportunity killer. You get pneumonia, your lungs fill up, you basically drown.

When you can get advanced care, your survival odds are very good. Once that system falls apart, it is first come first serve, and how healthy are you. A lot of younger Americans are very unhealthy with multiple comorbidity factors.

Evergreen Hospital ran out of beds today.

Winter is coming."

James Lawler, MD, MPH, FIDSA  
Director, International Programs & Innovation  
Global Center for Health Security, and  
Associate Professor of Medicine  
Division of Infectious Diseases  
University of Nebraska Medical Center  
m:  
james.lawler@unmc.edu

<2C4EE4AF32384D10986ED17D25126D99.png>

**From:** Carter Mecher

**Sent:** Saturday, March 14, 2020 4:32:54 PM

**To:** Parker Jr, Gerald W <gparker@cvm.tamu.edu>; Dr. Eva K Lee

**Cc:** Lawler, James V <james.lawler@unmc.edu>; Caneva, Duane <duane.caneva@hq.dhs.gov>; Tom Bossert  
Hanfling, Dan <DHanfling@iq.t.org>;  
Gruber,David (DSHS) <David.Gruber@dshs.texas.gov>; Dr. Eva

Richard Hatchett

<richard.hatchett@cepi.net>; McDonald, Eric  
 <Eric.McDonald@sdcounty.ca.gov>; Borio, Luciana  
 <LBorio@iqt.org>; Brian Benson  
 Tracey McNamara <tmcNamara@westernu.edu>; Baric, Ralph S  
 <rbaric@email.unc.edu>; Mecher, Carter (VA.GOV)  
 <carter.mecher@va.gov>; Hunt, Richard (OS/ASPR/EMMO)  
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 <jwleduc@utmb.edu>; Johnson, Robert (OS/ASPR/BARDA)  
 <Robert.Johnson@hhs.gov>; Yeskey, Kevin  
 <kevin.yeskey@hhs.gov>; Disbrow, Gary (OS/ASPR/BARDA)  
 <Gary.Disbrow@hhs.gov>; Redd, John (OS/ASPR/SPPR)  
 <John.Redd@hhs.gov>; Hassell, David (Chris) (OS/ASPR/IO)  
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 <sangeeta.kaushik@hq.dhs.gov>; Lee, Scott (OS/ASPR/EMMO)  
 <Scott.Lee@hhs.gov>; Larry G <PadgetLG@state.gov>; Ryan  
 Morhard <Ryan.Morhard@weforum.org>; Steven Jt(tCHFStDPH  
 ) <steven.stack@ky.gov>; Adams, Jerome (HHS/OASH)  
 <Jerome.Adams@hhs.gov>; Mansoura, Monique K.  
 <mmansoura@mitre.org>; Fantinato, Jessica (USDA.GOV)  
 <jessica.fantinato@usda.gov>; DC <michelle.colby@usda.gov>;  
 danny.shiau@usuhs.edu <danny.shiau@usuhs.edu>; Cordts,  
 Jerome (CTR) <jerome.cordts@associates.hq.dhs.gov>;  
 Schnitzer, Jay J <jschnitzer@mitre.org>; Ignacio, Joselito  
 <joselito.ignacio@fema.dhs.gov>; Will Gaskins  
 <will.gaskins@efiia.com>; Kevin Montgomery  
 <kevin@collaborate.org>; Logan, Linda L  
 <llogan@cvm.tamu.edu>; LLogandakar

rajeev.venkayya@takeda.com

<rajeev.venkayya@takeda.com>

**Subject:** RE: Red Dawn Raging Start March 4

Non-UNMC email

Is anyone at CDC monitoring ILI?



Here is the latest flu surveillance for Hong Kong, South Korea, US; the states of CA, OR, WA, TX; and the cities of Seattle, NYC, and Chicago (LA hasn't reported week 10 yet).

Why did the US ILI curve deflect up this week, while influenza positive tests are tracing down? Seeing the same wrt ILI increasing in WA, OR, Seattle, Chicago, and NYC. Is this influenza A, COVID, or both? Chicago and NYC are concerning because their influenza virus detection is going down and ILI is going up.

Sent from [Mail \[go.microsoft.com\]](mailto:Mail [go.microsoft.com]) for Windows 10

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**From:** Carter Mecher  
**Sent:** Saturday, March 14, 2020 7:58 AM  
**To:** Parker Jr, Gerald W; Dr. Eva K Lee; \_\_\_\_\_  
**Cc:** [Lawler, James V](#); [Caneva, Duane](#); [Tom Bossert](#); [Hanfling, Dan](#); [Gruber, David \(DSHS\)](#); [Dr. Eva Lee](#); [CHRISTOPHER ALLEN](#); [jamison.day@gmail.com](mailto:jamison.day@gmail.com); [Richard Hatchett](#); [McDonald, Eric](#); [Borio, Luciana](#); [Brian Benson](#); [Tracey McNamara](#); [Baric, Ralph S](#); [Mecher, Carter \(VA.GOV\)](#); [Hunt, Richard \(OS/ASPR/EMMO\)](#); [WILKINSON, THOMAS](#); [M.D.](#); [David](#); [Charity A@CDPH](#); [Gregory J](#); [Walters, William \(STATE.GOV\)](#); [HAMILTON, CAMERON](#); [Dodgen, tDaniel \(OS/ASPR/SPPR\)](#); [DeBord, Kristin \(OS/ASPR/SPPR\)](#); [Phillips, Sally \(OS/ASPR/SPPR\)](#); [Matthew J CIV USARMY \(USA\)](#); [Lisa Koonin](#); [HARVEY, MELISSA](#); [WOLFE, HERBERT](#); [Eastman, Alexander](#); [EVANS, MARIEFRED](#); [jwleduc@utmb.edu](mailto:jwleduc@utmb.edu); [Johnson, Robert \(OS/ASPR/BARDA\)](#); [Yeskey, Kevin](#); [Disbrow, Gary \(OS/ASPR/BARDA\)](#); [Redd, John \(OS/ASPR/SPPR\)](#); [Hassell, David \(Chris\) \(OS/ASPR/IO\)](#); [Hamel, Joseph \(OS/ASPR/IO\)](#); [Wade, David](#); [TARANTINO, DAVID A](#); [KAUSHIK, SANGEETA](#); [Lee, Scott \(OS/ASPR/EMMO\)](#); [Larry G](#); [Ryan Morhard](#); [Steven Jt\(tCHFStDPH\)](#); [Adams, Jerome \(HHS/OASH\)](#); [Mansoura, Monique K.](#); [Fantinato, Jessica \(USDA.GOV\)](#); [DC](#); [danny.shiau@usuhs.edu](mailto:danny.shiau@usuhs.edu); [Cordts, Jerome \(CTR\)](#); [Schnitzer, Jay J](#); [Ignacio, Joselito](#); [Will Gaskins](#); [Kevin Montgomery](#); [Logan, Linda L](#); [LLogandakar](#); [rajeev.venkayya@takeda.com](mailto:rajeev.venkayya@takeda.com)  
**Subject:** RE: Red Dawn Raging Start March 4

Most of you have been involved in table top exercises of an outbreak. In those exercises they commonly show a map of the US with the number of cases noted and extent of

spread. At various points in the scenario, a facilitator will ask the participants what actions should be taken. I took the graphic of the US map from the NYTimes and created a PowerPoint movie from Mar 4 (the first day that the NYTimes presented that map) through today.

In this scenario, the facilitator pauses now on March 14. At this point the virus has already spread to more than 120 countries. The virus is highly transmissible with an Ro of about 2.5 and has a CFR of 0.5%-1.0%. The elderly and those with chronic medical conditions are at greatest risk.

The response has been hindered by serious delays in the ability to confirm disease with diagnostic testing. This testing capacity is limited. Case ascertainment is limited due to the testing constraints. It is believed that over the next two weeks capacity for testing should improve. However, the demand for testing is anticipated to increase exponentially over the next 2 weeks. A few areas in the US have been particularly hard hit—Washington and California.

The current US case count is 2,654 with 49 deaths. What actions would you take on March 14?

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---

**From:** [Parker Jr, Gerald W](#)

**Sent:** Saturday, March 14, 2020 12:49 AM

**To:** [Carter Mecher](#); [Dr. Eva K Lee](#); \_\_\_\_\_

**Cc:** [Lawler, James V](#); [Caneva, Duane](#); [Tom Bossert](#); [Hanfling, Dan](#); [Gruber, David \(DSHS\)](#); [Dr. Eva Lee](#); [CHRISTOPHER ALLEN](#); [jamison.day@gmail.com](#); [Richard Hatchett](#); [McDonald, Eric](#); [Borio, Luciana](#); [Brian Benson](#); [Tracey McNamara](#); [Baric, Ralph S](#); [Mecher, Carter \(VA.GOV\)](#); [Hunt, Richard \(OS/ASPR/EMMO\)](#); [WILKINSON, THOMAS](#); [M.D.](#); [David](#); [Charity A@CDPH](#); [Gregory J](#); [Walters, William \(STATE.GOV\)](#); [HAMILTON, CAMERON](#); [Dodgen, tDaniel \(OS/ASPR/SPPR\)](#); [DeBord, Kristin \(OS/ASPR/SPPR\)](#); [Phillips, Sally \(OS/ASPR/SPPR\)](#); [Matthew J CIV](#); [USARMY \(USA\)](#); [Lisa Koonin](#); [HARVEY, MELISSA](#); [WOLFE, HERBERT](#); [Eastman, Alexander](#); [EVANS, MARIEFRED](#); [jwleduc@utmb.edu](#); [Johnson, Robert \(OS/ASPR/BARDA\)](#); [Yeskey, Kevin](#); [Disbrow, Gary \(OS/ASPR/BARDA\)](#); [Redd, John \(OS/ASPR/SPPR\)](#); [Hassell, David \(Chris\) \(OS/ASPR/IO\)](#); [Hamel, Joseph \(OS/ASPR/IO\)](#); [Wade, David](#); [TARANTINO, DAVID A](#); [KAUSHIK, SANGEETA](#); [Lee, Scott \(OS/ASPR/EMMO\)](#); [Larry G](#); [Ryan Morhard](#); [Steven Jt\(tCHFStDPH\)](#); [Adams, Jerome \(HHS/OASH\)](#); [Mansoura, Monique K.](#); [Fantinato, Jessica \(USDA.GOV\)](#); [DC](#); [danny.shiau@usuhs.edu](#); [Cordts, Jerome \(CTR\)](#); [Schnitzer, Jay J](#); [Ignacio, Joselito](#); [Will Gaskins](#); [Kevin Montgomery](#); [Logan, Linda L](#); [LLogandakar](#); [rajeev.venkayya@takeda.com](#)

**Subject:** Re: Red Dawn Raging Start March 4

Carter, thank you for the excellent analysis... I totally agree. I am sure that we will start seeing second guessing because of the politico article and the CDC guidance. I know that I will need to start preparing a response to authorities in Texas and in my university. your analysis is very helpful.

Keep up the good fight!!

Gerry Parker

**From:** Carter Mecher

**Sent:** Friday, March 13, 2020 7:13:19 PM

**To:** Dr. Eva K Lee;

**Cc:** Lawler, James V; Parker Jr, Gerald W; Caneva, Duane; Tom Bossert; Hanfling, Dan; Gruber, David (DSHS); Dr. Eva Lee; CHRISTOPHER ALLEN;

Richard Hatchett; McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON; Dodgen, tDanielt(OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH ); Adams, Jerome (HHS/OASH); Mansoura, Monique K.; Fantinato, Jessica (USDA.GOV); DC; danny.shiau@usuhs.edu; Cordts, Jerome (CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; Kevin Montgomery; Logan, Linda L; LLogandakar; rajeev.venkayya@takeda.com  
**Subject:** RE: Red Dawn Raging Start March 4

I don't think the intent is to close schools for only 2 weeks. Longer term school closure will be necessary.

What CDC is not accounting for is that we have been flying blind for weeks with essentially no surveillance. This was due to the delays associated with the diagnostic test

developed by CDC and the very narrow CDC definition of a PUI that really hampered our ability to even identify community transmission. We have raised this concern repeatedly. Our general sense was that community transmission was already occurring several weeks ago (and we stated so at the time over email and on conference calls), but nobody could prove it because CDC would only perform confirmatory testing on cases meeting the PUI definition. And the PUI criteria by definition excluded any potential case of community transmission. It was very circular. CDC placed state and local public health in a bit of a Catch 22.

So after a long delay we finally have the ability to test more broadly. If you recall, CDC only expanded the PUI incrementally at first to include severely ill patients with no travel hx or link to a known case. It was only later that testing was opened up more broadly. Can a model incorporate that amount of confusion into the initial conditions?

Once testing began in earnest, the numbers of cases exploded. It was like popcorn (also as we predicted). Cases were appearing everywhere. I would challenge anyone to provide an accurate estimate of prevalence in the US. I'd be interested in how certain they would be of that estimate +/-?

The difference between models and real life is that with models we can set the parameters. How would they model what happened in Italy? On Feb 20, they had 3 cases and no deaths. This is what happened since:

| Italy  |            |               |                          |
|--------|------------|---------------|--------------------------|
| Date   | Cum Deaths | Cum Confirmed | Critical Condition (ICU) |
| 30-Jan | 0          | 2             |                          |
| 31-Jan | 0          | 2             |                          |
| 7-Feb  | 0          | 3             |                          |
| 20-Feb | 0          | 3             | 2                        |
| 21-Feb | 1          | 20            | 6                        |
| 22-Feb | 2          | 63            | 7                        |

|        |       |        |       |
|--------|-------|--------|-------|
| 23-Feb | 3     | 155    | 26    |
| 24-Feb | 7     | 229    | 23    |
| 25-Feb | 11    | 322    | 19    |
| 26-Feb | 12    | 453    |       |
| 27-Feb | 17    | 655    |       |
| 28-Feb | 21    | 889    | 64    |
| 29-Feb | 29    | 1,128  | 105   |
| 1-Mar  | 34    | 1,694  | 140   |
| 2-Mar  | 52    | 2,036  | 166   |
| 3-Mar  | 79    | 2,502  |       |
| 4-Mar  | 107   | 3,089  | 295   |
| 5-Mar  | 148   | 3,858  | 351   |
| 6-Mar  | 197   | 4,636  | 462   |
| 7-Mar  | 233   | 5,833  | 567   |
| 8-Mar  | 366   | 7,375  | 650   |
| 9-Mar  | 463   | 9,172  | 733   |
| 10-Mar | 631   | 10,149 | 877   |
| 11-Mar | 827   | 12,264 | 1,028 |
| 12-Mar | 1,016 | 15,113 | 1,153 |
| 13-Mar | 1,266 | 17,660 | 1,328 |

The difference between models and real life is that with models we can set the parameters as if they are known. In real life, these parameters are as clear as mud.

To check the accuracy of the model for predicting real life, I would ask that they run Italy for us to show us how well handwashing and isolation would work. How would they model what happened in Italy? On Feb 20, Italy had 3 cases and no deaths. On that day the modelers and the guidance CDC just released would not advise to take any aggressive action. On Feb 21, they had 1 death and 20 cases with 6 patients in the ICU. This is a country of 51 M. What would CDC guidance

have advised Italy to do on Feb 21? On Feb 22, Italy had a cumulative total of 2 deaths, 63 cases with 7 patients in the ICU. How would CDC have described what was going on in Italy? Would this meet their definition of widespread community transmission? I doubt it. CDC and the CDC modeler would have recommended sitting tight. Italy responded extremely aggressively. This is what happened since. I think the public health officials and political leaders in Italy acted very quickly and very aggressively—much more quickly and aggressively than what we did when the outbreak began in Seattle two weeks ago. I would ask the modeler and CDC when they would have pulled the trigger in Italy. We have the actual data. The modeler can run his models and can point out what he/she would do and when it should be done. I suspect early on in Italy we would have heard exactly what we are hearing now.

I don't pretend to have perfect knowledge of the extent of disease in the US. There is a lot of uncertainty. But given this uncertainty, isn't the safest approach to close the schools until we know more? We can always reopen the schools. If we delay our response and the outbreak takes off like Italy, we will have made a terrible gamble with the lives of Americans, over what, an extend spring break? Which side of the bet would you take if you were the responsible official (mayor, governor, public health official)?

Again, nobody is advocating a short closure of schools. I don't think it would be prudent to play it cute and try to play chicken with this virus and hold out to the last moment to pull the trigger. It is like thinking you can time the market. You don't do that when thousands of lives potentially hang in the balance. That is what I would tell my mayor, or my governor, or my President.

Sent from [Mail](#) for Windows 10

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**From:** [Dr. Eva K Lee](#)  
**Sent:** Friday, March 13, 2020 7:16 PM  
**To:**  
**Cc:** [Lawler, James V](#); [Parker Jr, Gerald W](#); [Caneva, Duane](#); [Tom Bossert](#); [Hanfling, Dan](#); [Gruber, David \(DSHS\)](#); [Dr. Eva Lee](#); [CHRISTOPHER ALLEN](#); [jamison.day@gmail.com](#); [Richard Hatchett](#); [McDonald, Eric](#); [Borio, Luciana](#); [Brian Benson](#); [Tracey McNamara](#); [Baric, Ralph S](#); [Mecher, Carter \(VA.GOV\)](#); [Hunt, Richard \(OS/ASPR/EMMO\)](#); [WILKINSON, THOMAS](#); [M.D.](#); [David](#); [Charity A@CDPH](#); [Gregory J](#); [Walters, William \(STATE.GOV\)](#); [HAMILTON, CAMERON](#); [Dodgen, tDaniel \(OS/ASPR/SPPR\)](#); [DeBord, Kristin \(OS/ASPR/SPPR\)](#); [Phillips, Sally \(OS/ASPR/SPPR\)](#); [Matthew J CIV USARMY \(USA\)](#); [Lisa Koonin](#); [HARVEY, MELISSA](#); [WOLFE, HERBERT](#); [Eastman, Alexander](#); [EVANS, MARIEFRED](#); [jwleduc@utmb.edu](#); [Johnson, Robert \(OS/ASPR/BARDA\)](#); [Yeskey, Kevin](#); [Disbrow, Gary \(OS/ASPR/BARDA\)](#); [Redd, John \(OS/ASPR/SPPR\)](#); [Hassell, David \(Chris\) \(OS/ASPR/IO\)](#); [Hamel, Joseph \(OS/ASPR/IO\)](#); [Wade, David](#); [TARANTINO, DAVID A](#); [KAUSHIK, SANGEETA](#); [Lee, Scott \(OS/ASPR/EMMO\)](#); [Larry G](#); [Ryan Morhard](#); [Steven Jt\(tCHFStDPH\)](#); [Adams, Jerome \(HHS/OASH\)](#); [Mansoura, Monique K.](#); [Fantinato, Jessica \(USDA.GOV\)](#); [DC](#); [danny.shiau@usuhs.edu](#); [Cordts, Jerome \(CTR\)](#); [Schnitzer, Jay J](#); [Ignacio, Joselito](#); [Will Gaskins](#); [Kevin](#)

Montgomery; Logan, Linda L; LLogandakar;  
[rajeev.venkayya@takeda.com](mailto:rajeev.venkayya@takeda.com)

**Subject:** Re: Red Dawn Raging Start March 4

By the way, Google is funny, part of their work will be re-inventing RealOpt -- the system we have already put in place since 2009 and have continuous development CBRN capabilities and currently have 14,000 public health emergency response users. We have real-life drive-through models (all models have real-life data), dynamic real-time optimal resource allocation engine, optimal locations of facilities, optimal throughput and capacity. We even have pediatric and special needs, and language and socio-economic background etc. There's also the intra-facility disease spread disease models build-in, plus many more.

But I am sure with 1700 engineers, they will have at least 1,700 features. :).

<https://newton.isye.gatech.edu/DrLee/>

mobile:

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----- Original Message -----

On Friday, March 13, 2020 6:51 PM,  
wrote:

All,

I would question the underlying models being used, it's all in the assumptions, they drive the results. And as to the places that did well without school closures, each caught the epidemic before substantial transmission, this guidance is logically flawed.

Robert Glass

On Mar 13, 2020, at 4:33 PM,  
Lawler, James V  
<james.lawler@unmc.edu> wrote:

CDC is really missing the mark here. By the time you have "substantial community transmission" it is too late. It's like ignoring the smoke detector and waiting until your entire house is on fire to call the fire dept. Plus, how are you supposed to know when you have community transmission when they haven't been able to provide a diagnostic assay that can be used widely and at high volume?

**James Lawler, MD, MPH,  
FIDSA**

m:

[james.lawler@unmc.edu](mailto:james.lawler@unmc.edu)

---

**From:** "Parker Jr, Gerald W"  
<gparker@cvm.tamu.edu>  
**Date:** Saturday, March 14, 2020  
at 1:16 AM  
**To:** "Caneva, Duane"  
<duane.caneva@hq.dhs.gov>,  
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**Subject:** Re: Red Dawn Raging  
Start March 4

CDC school closure guidance

<https://www.cdc.gov/coronavirus/2019-ncov/downloads/considerations-for-school-closure.pdf>

**From:** Caneva, Duane  
<duane.caneva@hq.dhs.gov>  
**Sent:** Friday, March 13, 2020 5:08 PM  
**To:** Tom Bossert; Parker Jr, Gerald W  
**Cc:** cmecher@charter.net; Hanfling, Dan; Dr. Eva K Lee; Gruber, David (DSHS); Dr. Eva Lee; Lawler, James V; CHRISTOPHER ALLEN; Richard Hatchett; McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON; Dodgen, tDaniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven

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L; LLogandakar;  
rajeev.venkayya@takeda.com  
**Subject:** Re: Red Dawn Raging  
Start March 4

We should measure it in different  
communities and find out.

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**From:** Tom Bossert

**Sent:** Friday, March 13, 2020  
6:07:00 PM

**To:** Parker Jr, Gerald W  
<gparker@cvm.tamu.edu>

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<Joseph.Hamel@hhs.gov>; Wade,  
David <david.wade@hq.dhs.gov>;

TARANTINO, DAVID A  
<david.a.tarantino@cbp.dhs.gov>;  
KAUSHIK, SANGEETA  
<sangeeta.kaushik@hq.dhs.gov>;  
Lee, Scott (OS/ASPR/EMMO)  
<Scott.Lee@hhs.gov>; Larry G  
<PadgetLG@state.gov>; Ryan  
Morhard  
<Ryan.Morhard@weforum.org>;  
Steven Jt(tCHFStDPH )  
<steven.stack@ky.gov>; Adams,  
Jerome (HHS/OASH)  
<Jerome.Adams@hhs.gov>;  
Mansoura, Monique K.  
<mmansoura@mitre.org>;  
Fantinato, Jessica (USDA.GOV)  
<jessica.fantinato@usda.gov>; DC  
<michelle.colby@usda.gov>;  
danny.shiau@usuhs.edu  
<danny.shiau@usuhs.edu>;  
Cordts, Jerome (CTR)  
<jerome.cordts@associates.hq.dhs  
.gov>; Schnitzer, Jay J  
<jschnitzer@mitre.org>; Ignacio,  
Joselito  
<joselito.ignacio@fema.dhs.gov>;  
Will Gaskins  
<will.gaskins@efia.com>; Kevin  
Montgomery  
<kevin@collaborate.org>; Logan,  
Linda L <llogan@cvm.tamu.edu>;  
LLogandakar

rajeev.venkayya@takeda.com  
<rajeev.venkayya@takeda.com>  
**Subject:** Re: Red Dawn Raging  
Start March 4

**CAUTION:** This email originated from  
outside of DHS. DO NOT click links or  
open attachments unless you recognize  
and/or trust the sender. Contact your  
component SOC with questions or  
concerns.

That article snippet seems  
misleading. I wonder if the CDC  
guidance it's based on is equally  
unclear.

-Tom

On Mar 13, 2020, at  
6:04 PM, Parker Jr,  
Gerald W  
<gparker@cvm.tamu.  
edu> wrote:

Carter and others -  
article just published  
in Politico Pro. CDC  
suggests school  
closures will not have  
much impact. There  
is a discussion of short  
term versus longer  
term... Is this  
misleading? What are  
your thoughts?

<pastedImage.png>

**From:**

<cmecher@charter.ne  
t>

**Sent:** Friday, March  
13, 2020 4:35 PM

**To:**

**Cc:** 'Hanfling, Dan';  
'Dr. Eva K Lee';  
'Gruber,David  
(DSHS)'; 'Caneva,  
Duane'; 'Dr. Eva Lee';  
'Lawler, James V';  
'CHRISTOPHER  
ALLEN';  
'jamison.day@gmail.c  
om'; 'Tom Bossert';  
Parker Jr, Gerald W;  
'Richard Hatchett';  
'McDonald, Eric';  
'Borio, Luciana';  
'Brian Benson';  
'Tracey McNamara';  
'Baric, Ralph S';  
'Mecher, Carter  
(VA.GOV)'; 'Hunt,  
Richard  
(OS/ASPR/EMMO)';  
'WILKINSON,  
THOMAS'; 'M.D.';  
'David'; 'Charity  
A@CDPH'; 'Gregory

J'; 'Walters, William  
(STATE.GOV)';  
'HAMILTON,  
CAMERON';

'Dodgen,tDanielt(OS/  
ASPR/SPPR)';  
'DeBord,Kristin  
(OS/ASPR/SPPR)';  
'Phillips, Sally  
(OS/ASPR/SPPR)';  
'Matthew J CIV  
USARMY (USA)';  
'Lisa Koonin';  
'HARVEY,  
MELISSA'; 'WOLFE,  
HERBERT';  
'Eastman, Alexander';  
'EVANS,  
MARIEFRED';  
'jwleduc@utmb.edu';  
'Johnson, Robert  
(OS/ASPR/BARDA)';  
'Yeskey, Kevin';  
'Disbrow, Gary  
(OS/ASPR/BARDA)';  
'Redd, John  
(OS/ASPR/SPPR)';  
'Hassell, David (Chris)  
(OS/ASPR/IO)';  
'Hamel, Joseph  
(OS/ASPR/IO)';  
'Wade, David';  
'TARANTINO,  
DAVID A';  
'KAUSHIK,  
SANGEETA'; 'Lee,  
Scott  
(OS/ASPR/EMMO)';  
'Larry G'; 'Ryan  
Morhard'; 'Steven  
Jt(tCHFStDPH)';  
'Adams, Jerome  
(HHS/OASH)';  
'Mansoura, Monique  
K.'; 'Fantinato, Jessica  
(USDA.GOV)'; 'DC';  
'danny.shiau@usuhs.e  
du'; 'Cordts, Jerome  
(CTR)'; 'Schnitzer, Jay  
J'; 'Ignacio, Joselito';  
'Will Gaskins'; 'Kevin  
Montgomery'; Logan,  
Linda L;  
'LLogandakar';  
'rajeev.venkayya@tak



eda.com'  
**Subject:** RE: Red  
Dawn Raging Start  
March 4

A cruise ship  
passenger in the  
Caribbean now

FIRST COVID-19  
CASE DIAGNOSED  
IN CAYMANS – The  
Public Health  
Department confirms  
that one of the  
persons tested  
recently for the novel  
coronavirus has tested  
positive. “The patient  
is a visitor who was  
transferred from a  
cruise ship for a  
critical cardiac issue,”  
said Medical Health  
Officer, Dr. Samuel  
Williams-Rodriguez.  
Dr. Williams  
continued, “The  
patient was doing well  
but subsequently  
developed breathing  
difficulties, was  
isolated and a test  
taken has confirmed is  
suffering with the  
novel coronavirus.

More countries and  
overseas territories  
reporting their first  
cases:

Gabon

Ghana

Trinidad and Tobago

Kazakhstan

Kosovo

Suriname

Aruba

Guadeloupe

Cayman Islands

Uruguay 4

Venezuela 2

Guatemala 1

Kenya 1

Sudan 1

Ethiopia 1

---

From:

To: Dan"

Cc: "Dr. Eva K  
Lee", David (DSHS)",  
Duane", "Dr. Eva  
Lee", James V",  
"CHRISTOPHER  
ALLEN",  
"jamison.day@gmail.c  
om", "Tom Bossert",  
Gerald W", "Richard  
Hatchett", Eric",  
Luciana", "Brian  
Benson", "Tracey  
McNamara", Ralph  
S", Carter  
(VA.GOV)", Richard  
(OS/ASPR/EMMO)",  
THOMAS", "M.D.",  
"David", "Charity  
A@CDPH", "Gregory  
J", William  
(STATE.GOV)",  
CAMERON",

,tDanielt(OS/ASPR/S  
PPR)", Kristin  
(OS/ASPR/SPPR)",  
Sally  
(OS/ASPR/SPPR)",  
"Matthew J CIV  
USARMY (USA)",  
"Lisa Koonin",  
MELISSA",

HERBERT",  
Alexander",  
MARIEFRED",  
"jwleduc@utmb.edu",  
Robert  
(OS/ASPR/BARDA)"  
, Kevin", Gary  
(OS/ASPR/BARDA)"  
, John  
(OS/ASPR/SPPR)",  
David (Chris)  
(OS/ASPR/IO)",  
Joseph  
(OS/ASPR/IO)",  
David", DAVID A",  
SANGEETA", Scott  
(OS/ASPR/EMMO)",  
"Larry G", "Ryan  
Morhard", "Steven  
Jt(tCHFStDPH )",  
Jerome  
(HHS/OASH)",  
Monique K.", Jessica  
(USDA.GOV)",  
"DC",  
"danny.shiau@usuhs.e  
du", Jerome (CTR)",  
Jay J", Joselito", "Will  
Gaskins", "Kevin  
Montgomery", Linda  
L", "LLogandakar",  
"rajeev.venkayya@tak  
eda.com"

Sent: Friday March 13  
2020 2:30:49PM  
Subject: RE: Red  
Dawn Raging Start  
March 4

BREAKING: Los  
Angeles county in  
California announces  
the closure of all  
schools; this is the 2nd  
largest school district  
in the U.S. after NYC

---

From: "Hanfling,  
Dan"  
To: "Dr. Eva K Lee",  
"Carter Mecher"  
Cc: David (DSHS)",  
Duane", "Dr. Eva  
Lee", James V",

"CHRISTOPHER  
ALLEN",  
"jamison.day@gmail.c  
om", "Tom Bossert",  
Gerald W", "Richard  
Hatchett", Eric",  
Luciana", "Brian  
Benson", "Tracey  
McNamara", Ralph  
S", Carter  
(VA.GOV)", Richard  
(OS/ASPR/EMMO)",  
THOMAS", "M.D.",  
"David", "Charity  
A@CDPH", "Gregory  
J", William  
(STATE.GOV)",  
CAMERON",

,tDanielt(OS/ASPR/S  
PPR)",Kristin  
(OS/ASPR/SPPR)",  
Sally  
(OS/ASPR/SPPR)",  
"Matthew J CIV  
USARMY (USA)",  
"Lisa Koonin",  
MELISSA",  
HERBERT",  
Alexander",  
MARIEFRED",  
"jwleduc@utmb.edu",  
Robert  
(OS/ASPR/BARDA)"  
, Kevin", Gary  
(OS/ASPR/BARDA)"  
, John  
(OS/ASPR/SPPR)",  
David (Chris)  
(OS/ASPR/IO)",  
Joseph  
(OS/ASPR/IO)",  
David", DAVID A",  
SANGEETA", Scott  
(OS/ASPR/EMMO)",  
"Larry G", "Ryan  
Morhard", "Steven  
Jt(tCHFStDPH)",  
Jerome  
(HHS/OASH)",  
Monique K.", Jessica  
(USDA.GOV)",  
"DC",  
"danny.shiau@usuhs.e  
du", Jerome (CTR)",  
Jay J", Joselito", "Will

Gaskins", "Kevin  
Montgomery", Linda  
L", "LLogandakar",  
"rajeev.venkayya@tak  
eda.com"

Sent: Friday March 13  
2020 2:15:35PM  
Subject: RE: Red  
Dawn Raging Start  
March 4

Continuing to work  
this angle – but it is  
awfully hard to build  
the car while we are  
speeding down the  
highway – that  
notwithstanding, we  
are making  
incremental progress  
here.

[https://www.washingt  
onpost.com/opinions/  
2020/03/13/your-  
smart-phone-could-be-  
essential-fight-against-  
coronavirus/](https://www.washingtonpost.com/opinions/2020/03/13/your-smart-phone-could-be-essential-fight-against-coronavirus/)

Dan Hanfling, MD

**From:** Dr. Eva K Lee  
<evalee-

**Sent:** Friday, March  
13, 2020 2:12 PM  
**To:** Carter Mecher  
<cmecher@charter.ne  
t>

**Cc:** Gruber,David  
(DSHS)  
<David.Gruber@dshs.  
texas.gov>; Caneva,  
Duane  
<duane.caneva@hq.d  
hs.gov>; 'Dr. Eva Lee'  
<eva.evalee.lee64@g  
mail.com>; 'Lawler,  
James V'  
<james.lawler@unmc.  
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'CHRISTOPHER  
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<chrisallen\_10@msn.com>;  
'jamison.day@gmail.com'  
<jamison.day@gmail.com>; 'Tom Bossert'  
<tom.bossert@me.com>; 'Parker Jr, Gerald W'  
<gparker@cvm.tamu.edu>; 'Richard Hatchett'  
<richard.hatchett@cepi.net>; 'McDonald, Eric'  
<Eric.McDonald@sdc.ounty.ca.gov>; Borio, Luciana  
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<brian.benson@icloud.com>; 'Tracey McNamara'  
<tmcNamara@westernu.edu>; 'Baric, Ralph S'  
<rbaric@email.unc.edu>; 'Mecher, Carter (VA.GOV)'  
<carter.mecher@va.gov>; 'Hunt, Richard (OS/ASPR/EMMO)'  
<Richard.Hunt@hhs.gov>; WILKINSON, THOMAS  
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<MartinGJ@state.gov>; 'Walters, William (STATE.GOV)'  
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<cameron.hamilton@hq.dhs.gov>;

>;  
'Dodgen,tDanielt(OS/  
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.gov>;  
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(OS/ASPR/SPPR)'  
<Kristin.DeBord@hhs  
.gov>; 'Phillips, Sally  
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<Sally.Phillips@hhs.g  
ov>; 'Matthew J CIV  
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<matthew.j.hepburn.ci  
v@mail.mil>; 'Lisa  
Koonin'  
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m>; HARVEY,  
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hs.gov>; WOLFE,  
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'jwleduc@utmb.edu'  
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s.gov>; Yeskey,  
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<kevin.yeskey@hhs.g  
ov>; 'Disbrow, Gary  
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<Gary.Disbrow@hhs.  
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<John.Redd@hhs.gov  
>; 'Hassell, David  
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; Wade, David  
<david.wade@hq.dhs.gov>; TARANTINO, DAVID A  
<david.a.tarantino@cbp.dhs.gov>; KAUSHIK, SANGEETA  
<sangeeta.kaushik@hq.dhs.gov>; 'Lee, Scott  
(OS/ASPR/EMMO)'  
<Scott.Lee@hhs.gov>; 'Larry G'  
<PadgetLG@state.gov>; 'Ryan Morhard'  
<Ryan.Morhard@weforum.org>; 'Steven  
Jt(tCHFStDPH )'  
<steven.stack@ky.gov>; 'Adams, Jerome  
(HHS/OASH)'  
<Jerome.Adams@hhs.gov>; 'Mansoura,  
Monique K.'  
<mmansoura@mitre.org>; 'Fantinato,  
Jessica (USDA.GOV)'  
<jessica.fantinato@usda.gov>; 'DC'  
<michelle.colby@usda.gov>;  
'danny.shiau@usuhs.edu'  
<danny.shiau@usuhs.edu>; Cordts, Jerome  
(CTR)  
<jerome.cordts@associates.hq.dhs.gov>;  
'Schnitzer, Jay J'  
<jschnitzer@mitre.org>; Ignacio, Joselito  
<joselito.ignacio@fema.dhs.gov>; 'Will  
Gaskins'  
<will.gaskins@efia.com>; 'Kevin  
Montgomery'  
<kevin@collaborate.org>; 'Logan, Linda L'  
<llogan@cvm.tamu.edu>; 'LLogandakar'  
<llogandakar@gmail.com>;  
'rajeev.venkayya@takeeda.com'



<rajeev.venkayya@ta  
keda.com>

**Subject:** RE: Red  
Dawn Raging Start  
March 4

Yes, virtual care is a  
must. This will  
supplemetn those who  
are coming in require  
direct interaction.

Virtual care is needed  
for at least 4 reasons.

1. To help leviate the  
surge of patient  
requests

2. To allow healthcare  
workers who are self-  
quarantine to be able  
to continue their care  
for other patients.

We want all the  
healthcare workers to  
be healthy. But if  
they're exposed to  
positive cases without  
knowing and have to  
be quarantine, can be  
due to exposure from  
family members or  
patients, then they are  
out. Their knowledge  
and expertise is  
critical and hence they  
need to use the tele-  
health capability to  
tend to patients.

3. Regular medical  
needs will be sidelined  
(as we can see in  
Italy, basically all

scrapped). So we need to expand tele-health to those patients who need to be taken care of (outside covid-19). It is unclear if it is wise for them to walk into the clinic, so they can choose tele-health to get consult and advice.

4. School children may need medical care. Some of them may get healthcare check at school. Now school is out and we need to think about tele-health or mobile clinic.

evalee-

<https://newton.isye.gatech.edu/DrLee/>

mobile:

Sent with ProtonMail  
Secure Email.

----- Original  
Message -----

On Friday, March 13,  
2020 1:34 PM, Carter  
Mecher  
<[cmecher@charter.net](mailto:cmecher@charter.net)>  
t> wrote:

David  
you make  
a valid

point. As the epidemic increases in intensity, the hospital capacity (defined by staffing) decreases as more staff become ill (following the epi curve) and the actions we take to slow the outbreak potentially add to the absenteeism. One thing to think about is how to effectively leverage HCWs who might be home for quarantine or who might be mildly ill and isolated at home or home with children because schools are closed.

Bad  
combinati  
on of a  
surge in  
patients  
and short-  
staffed.

In  
another  
conversat  
ion we  
are  
having,  
we need  
to very  
quickly  
pivot to  
virtual  
care in  
the  
outpatien  
t setting.  
It  
redefines  
what  
outpatien  
t capacity  
even is.

Sent from  
[Mail for](#)  
Windows  
10

---

**From:**  
[Dr. Eva](#)  
[K Lee](#)

**Sent:**  
Friday,  
March  
13, 2020  
12:58 PM

**To:**  
[Gruber,D](#)  
[avid](#)  
[\(DSHS\)](#)

**Cc:**

Caneva,  
Duane;  
cmecher  
@charter.  
net; 'Dr.  
Eva Lee';  
'Lawler,  
James V';  
'CHRIST  
OPHER  
ALLEN';  
'jamison.d  
ay@gmail  
.com';  
'Tom  
Bossert';  
'Parker  
Jr, Gerald  
W';  
'Richard  
Hatchett';  
'McDonal  
d, Eric';  
'Borio,  
Luciana';  
'Brian  
Benson';  
'Tracey  
McNama  
ra'; 'Baric,  
Ralph S';  
'Mecher,  
Carter  
(VA.GO  
V)';  
'Hunt,  
Richard  
(OS/ASP  
R/EMM  
O)';  
WILKIN  
SON,  
THOMA  
S; 'M.D.';  
'David';  
'Charity  
A@CDP  
H';  
'Gregory  
J';  
'Walters,  
William  
(STATE.  
GOV)';  
HAMILT  
ON,

CAMER  
ON;  
'rjglassjr  
@gmail.c  
om';  
'Dodgen,t  
Danielt(O  
S/ASPR/  
SPPR)';  
'DeBord,  
Kristin  
(OS/ASP  
R/SPPR)'  
;  
'Phillips,  
Sally  
(OS/ASP  
R/SPPR)'  
;  
'Matthew  
J CIV  
USARM  
Y  
(USA)';  
'Lisa  
Koonin';  
HARVE  
Y,  
MELISS  
A;  
WOLFE,  
HERBER  
T;  
Eastman,  
Alexande  
r;  
EVANS,  
MARIEF  
RED;  
'jwleduc  
@utmb.e  
du';  
'Johnson,  
Robert  
(OS/ASP  
R/BARD  
A)';  
Yeskey,  
Kevin;  
'Disbrow,  
Gary  
(OS/ASP  
R/BARD  
A)';  
'Redd,  
John  
(OS/ASP

R/SPPR)'  
; 'Hassell,  
David  
(Chris)  
(OS/ASP  
R/IO)';  
'Hamel,  
Joseph  
(OS/ASP  
R/IO)';  
'Hanfling,  
Dan';  
Wade,  
David;  
TARAN  
TINO,  
DAVID  
A;  
KAUSHI  
K,  
SANGEE  
TA; 'Lee,  
Scott  
(OS/ASP  
R/EMM  
O)';  
'Larry G';  
'Ryan  
Morhard';  
'Steven  
Jt(tCHFS  
tDPH )';  
'Adams,  
Jerome  
(HHS/O  
ASH)';  
'Mansour  
a,  
Monique  
K.';  
'Fantinato  
, Jessica  
(USDA.  
GOV)';  
'DC';  
'danny.shi  
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s.edu';  
Cordts,  
Jerome  
(CTR);  
'Schnitzer  
, Jay J';  
Ignacio,  
Joselito;  
'Will

Gaskins';  
'Kevin  
Montgom  
ery';  
'Logan,  
Linda L';  
'LLogand  
akar';  
'rajeev.ve  
nkayya@t  
akeda.co  
m'

**Subject:**

Re: Red  
Dawn  
Raging  
Start  
March 4

Dave,  
yes,  
hospital  
resources  
need to  
be  
considered  
and  
analyzed  
and  
optimized  
for the  
best  
outcome.  
I have  
incorporated  
some  
hospital  
resources  
in the  
model but  
have not  
plotted  
the  
results  
out for  
circulation.  
I will  
start  
doing  
that later  
today. I  
can't



draw a graph (by hand) like all of you. I am used to running the whole event and see what's happening. It is easier for me that way.

1. rapid testing, 2. timely implementation of NPI 3. Optimize and strategic hospital surge

all of them are inter-dependin g in a system network view, not linear. And clealry along these 3 there are many branches of (inter) dependen cies coming out that need our attentions

I will be  
doing a  
drive-  
through  
screening  
in  
DeKalb  
with the  
local  
leaders.  
Let's  
hope we  
get the  
test kits  
and the  
PPE.  
Does not  
seem like  
there's  
enough of  
anything..  
.. the  
logistics  
chain  
there is  
very  
slow.

evalee-  
gatech@

[https://ne](https://newton.isye.gatech.edu/DrLee/)  
[wton.isye](https://newton.isye.gatech.edu/DrLee/)  
[.gatech.e](https://newton.isye.gatech.edu/DrLee/)  
[du/DrLee](https://newton.isye.gatech.edu/DrLee/)  
[/](https://newton.isye.gatech.edu/DrLee/)

mobile:  
404-432-  
6835

Sent with  
ProtonM  
ail Secure  
Email.

-----  
Original

Message

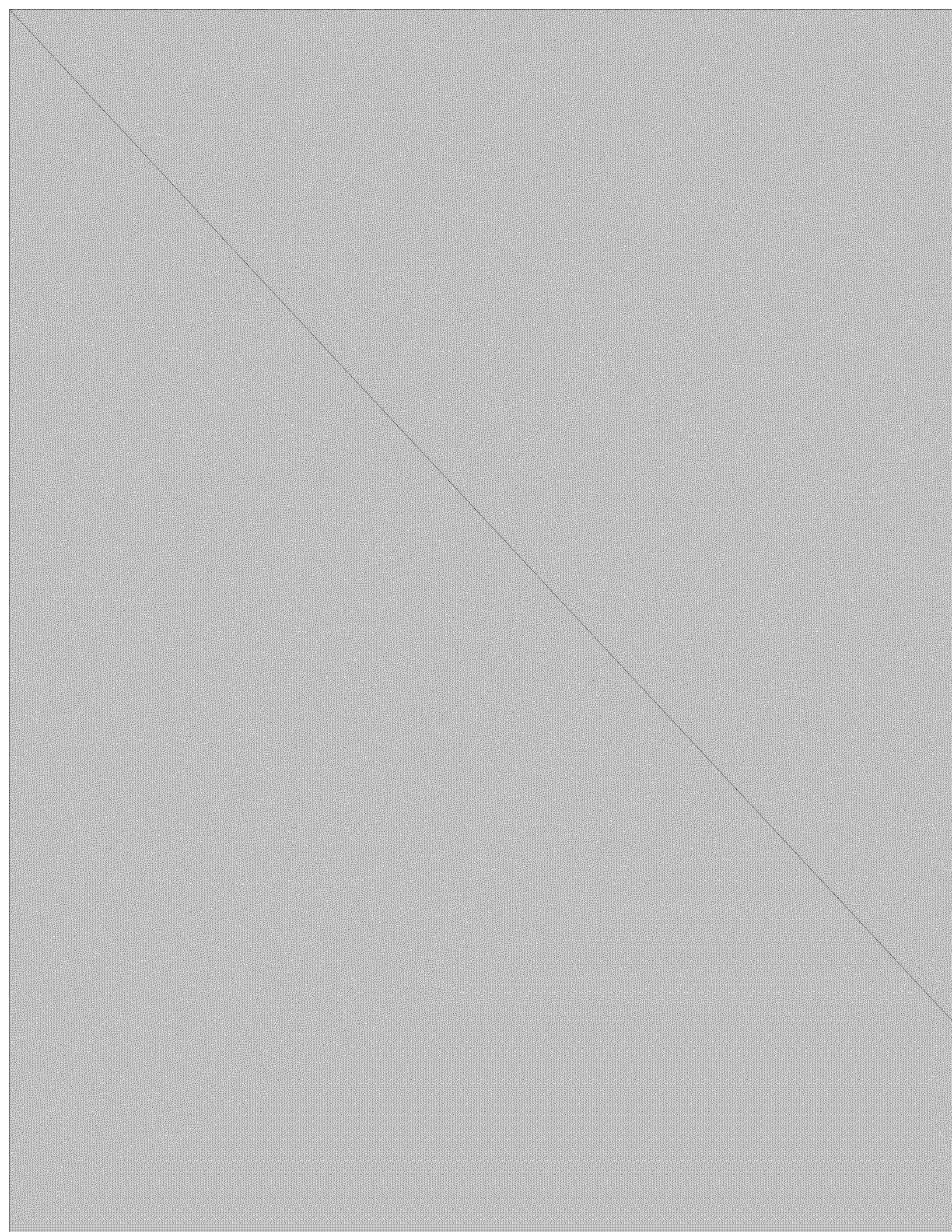
-----

On  
Friday,  
March  
13, 2020  
12:34  
PM,  
Gruber, David  
(DSHS)  
<[David.Gruber@dshs.texas.gov](mailto:David.Gruber@dshs.texas.gov)>  
wrote:

Much attention is to the graphic showing the impact of flattening the epi-curve on hospitals/healthcare. While I think it gets the point across I also think it is a bit misleading in that the line depicting healthcare capacity is flat.

During this outbreak, the hospital capacity line will drop significantly with an influx in patients even with NPIs and only come back up after modification of processes, reduction in cases or increases in resources are added.

I feel with so much visibility is on testing and NPIs, the focus on hospital and healthcare capacity is lost in the news cycle. Have drawn graphics below that show what's currently in the news and what should be presented (or at least used for public health and health planning.)





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 <mariefred.evans@associates.hq.dhs.gov>;  
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**Subject:** RE: Red Dawn Raging Start March 4

The Healthcare Sector private/ public partners need to organize in a national health reliability organization structure unhindered by government bureaucracy.

**Change my mind.**

**NHRO fiddled while Rome burned...**

*Hurricane Irma was one of the costliest hurricanes in U.S. history at nearly \$50 Billion in damages. It hit the Florida Keys heading north on September 10, 2017, heading up Florida's western coast, leaving Florida as a Tropical Storm and entering Georgia on September 11. In preparation for the storm, the Energy Sector pre-staged response resources near the state but outside the projected path of the storm. Governor Rick Scott quickly declared a state of emergency authorizing Energy Sector workers from outside of Florida*

*to support response operations, and within 3 days of Irma leaving Florida, over 60,000 Linesman technicians from 48 states and Canada entered Florida to repair the damaged power lines and restore electricity to about 6.5 million customers who had lost power. All were licensed professionals under the management of the private sector coordinating with Florida and FEMA for the hurricane response. Their wages were paid by Florida Power and Lights Company, those costs covered by a hurricane insurance policy paid for by its customers as part of their rates.*

*The National Disaster Medical System used up the last of its 4000 responders' deployment time. They were completely tapped out.*

## **II. Why a National Health Reliability Organization (NHRO)? The House of Medicine and the Need for Standards Development Processes**

We can look to the Energy Sector for instructive solutions driving reliability that may apply to the Health Sector. The Federal Power Act (FPA) of 2005 derived the authorities for the Federal Energy Reliability Commission (FERC) to have oversight of an Electric Reliability Organization (ERO), ultimately the National Electric Reliability Corporation (NERC), in its responsibilities to develop and enforce mandatory “reliability standards”. These standards impose requirements on users, owners, and operators of the bulk power system to ensure reliability of the power grid. Over \$1 Trillion in infrastructure owned and operated by over 3,500 utility organizations provides electricity to over 334 million customers.

The Energy Sector had its watershed moment with the Great Northeast Blackout of 1965 when a faulty setting of a protective relay on a high voltage transmission line in Ontario, Canada, failed. Over 30 million customers in the Northeast were without power for nearly 13 hours. In response to the blackout, voluntary reliability councils were established to investigate the causes and develop measures to reduce the likelihood of such events recurring. The NERC was established to provide a means for coordinating among interconnected utilities to ensure that the transmission network in the U.S. was reliable, adequate, and secure. In 1981, as the grid expanded to include sections of Canada and Mexico, the NERC changed from the *National* to the *North American* Electric Reliability Corporation with the same NERC acronym. On August 14, 2003, North America

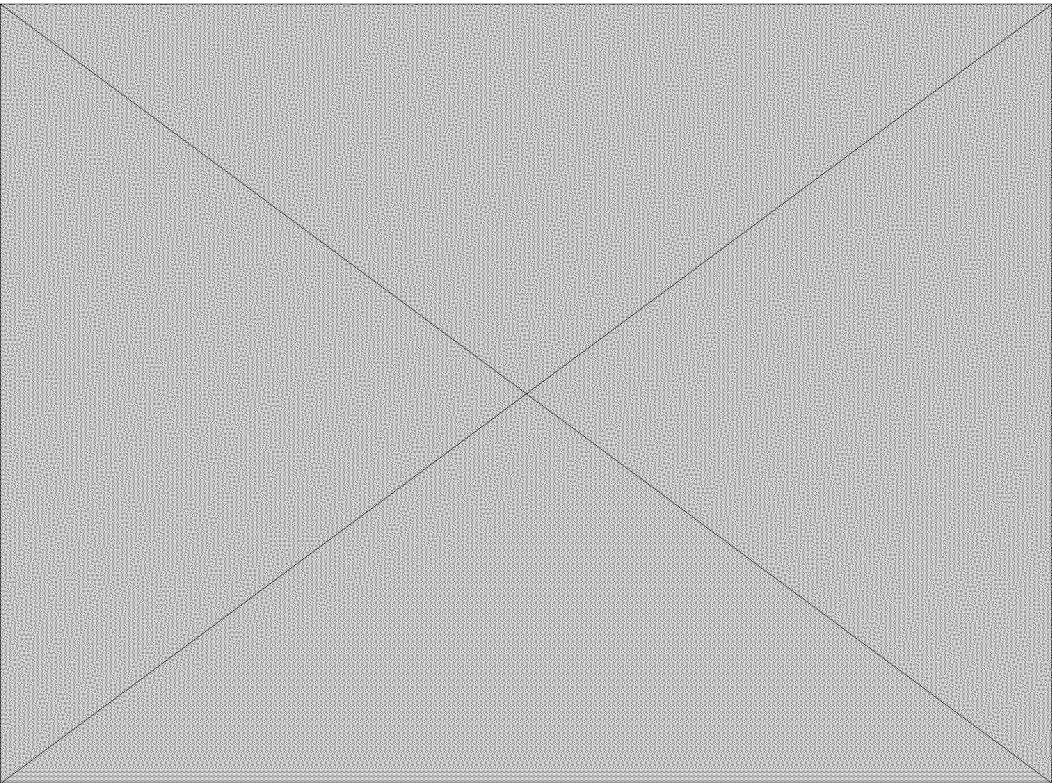
experienced its largest power blackout affecting 50 million customers extending across the Northeast into the Midwest. The cause was linked to “the 3 T’s” of power outages—trees, tools, and (lack of) training. As a result, Congress added Section 215 to the Federal Powers Act of 2005 that authorized the development of mandatory Reliability Standards by an independent electric reliability organization. This mandatory approach replaced the industry’s voluntary protocols and guidelines for operating and planning the bulk power system that had been in place since the 1960’s. While the NERC only covers bulk power generation and transmission, the regional councils broadened the membership to include all segments of the electric industry bulk power supply.

While NERC reliability standards do not cover the local, lowered voltage distribution of electricity--the power lines most often affected from storms--the industry as a whole has extended the reliability culture to the end customer through the NERC governance process that includes public stakeholders (i.e., customers) in the review of nearly all standards. Many corporations operate in bulk generation, transmission, *and* distribution, so are incentivized to “keep the lights on”. Within the industry, “coopetition” thrives because of the interdependencies, and the need for mutual aid and assistance that is frequently needed. And, at the end of the day, the industry is required to be reliable—keep the power on, and keep it affordable.

In the Health Sector, the same risks of cascading effects exist in the form of public health emergencies. The Sector is decentralized with limited, traditional, ineffective standards development processes and a splintered organizational structure. Associations, academies, and societies are formed by medical guilds to ensure specialty voices are heard; however, very little signal rises above the noise unless done so through adversity, crisis, or sensationalism. Contagious diseases, poorly established practices, defective devices, or dangerous treatments can impact the end customers, but the Sector lacks the infrastructure or mechanisms to measure and recognize adverse outcomes rapidly and effectively. The private sector is essentially disconnected from government coordination except through limited, tenuous paths, including licensing at the state level, and reimbursement rates by the Center for Medicare and Medicaid Services (CMS) driving standards and pricing. The “House of Medicine”, \$3.5 Trillion of annual economic activity in the U.S., is not merely a house divided, it is a house in splinters. So, what would a “Health Reliability Organization” look like in our health sector?



Figure 1. A National Health Reliability Organization (NRHO) for the House of Medicine, \$ 3.5T of economic activity.



**This ICE is Cool...**

*Amir Patel is a patient recovering from 4 vessel coronary artery bypass graft (CABG) surgery in a small, private hospital in Calcutta, India. Under the watchful eyes of his intensive care unit nurses, he has no less than 12 medical devices monitoring or treating his condition, including a pulsox to monitor his oxygen levels, an end-tidal CO2 monitor, an ECG monitoring his heart rate and tracing, several IV infusion pumps giving him IV fluids and medicines, and a blood pressure cuff cycling every 10 minutes to measure his blood pressure. Each device operates independently from the other with alarms programmed to trigger should that device detect some abnormal level of function. All of the data from these devices is being captured and recorded in an Integrated Clinical Environment (ICE) device—an “ICE Box”. It is a large amount of data that, under normal circumstances will never make it to Amir’s electronic health record. But today, unfortunately, this will not be a normal outcome. One of Amir’s graft sutures to a vessel supplying blood to his heart has failed, and the vessel is leaking. Though several of the devices are registering significant, detectable changes consistent with this blood loss and the loss of blood supply to his heart, none are reaching a threshold level to alarm. By the time one of them alarms, and the nurse responds, and the surgeon is consulted, and they investigate and identify the cause of the alarm, Amir has lost too much blood to his heart and suffers a fatal cardiac arrest. While this is a known complication and risk of these surgeries, his surgeon*

*is not satisfied.*

*This surgeon, a renowned cardiac surgeon who practiced in the United States for decades before “retiring” and opening this specialty hospital in India, provides these surgeries to patients for a flat fee of \$ 600. The patients would otherwise have no hope of affording it elsewhere. His hospital is extremely efficient, utilizing a systems operations engineered approach to optimize the process. He is also working with a research project from the U.S. to integrate the data from the multiple medical devices into the ICE Box. On analyzing the output from Amir’s case, he is able to identify a pattern of changes captured by several of the medical devices that demonstrated a predictable pattern expected with this type of complication. This pattern begins to emerge nearly 30 minutes before any single device alarms, and it is fairly specific for the injury type. Applying this pattern to all the patients in his care, he now has a more sensitive indicator for an adverse outcome that is also specific to the type of complication that is occurring. It can be applied as an “algorithm” looking across the entire enterprise to identify complications earlier to the benefit of all patients being monitored and improving the quality of care. It is likely additional devices could add sensitivity or specificity to the predictive strength. It’s also likely there are patterns that identify other complications, that they can be further refined for sensitivity and specificity— cool, always improving apps for the ICE Box.*

*But where do these algorithms or apps get submitted? How are they validated? Who controls the “library” or registry for other such algorithm? Is this intellectual property? Is there a marketplace for these discoveries? Who controls what goes on the shelves in the ICE Box?*

### **III. National Health Reliability Organization Systems Architecture**

The rate of technology advancements across the various sectors of society continues its exponential climb. The balance between regulatory oversight and free, unfettered development and innovation must be managed through a deliberate, intentional, systematic process. Public-private partnerships play a role, as do development of consensus based industry standards. Title XII of Energy Policy Act of 2005 added Section 215 to the Federal Powers Act that authorized the Federal Energy Regulatory Commission (FERC) to certify an independent electric reliability organization to develop and enforce mandatory Reliability Standards. This empowered the private sector to self-enforce compliance of its industry standards. If and how this could be applied in the Health Sector requires much further, careful consideration. It requires the collection of data to

analyze and validate outcomes. It introduces new drivers for the sector that seek to optimize operations, improve efficiency, and incorporate improvements system wide that are evidence-based. It requires new tools and disciplines to find these efficiencies, identify risk, improving quality while reducing costs.

## **A. Basic Organizing Principles Applied to the National Healthcare Reliability Organization (NHRO)**

### **Guiding Principles (Harvard Leadership Course)**

- Unity of Effort
- Generosity of spirit and action
- Stay in one's lane and assist others to succeed in theirs
- No ego, no blame
- A foundation of trusting relationships

### **Structural Principles**

- **Map the Systems Architecture Out:** Enterprise Architecture with Agile Taxonomy (Folksonomy) and Ontology that captures the Engineered, Systems of Systems of the sector
- **Determine the Business Rules:** Business Process Management with structured Rules of Engagement
- **Use a Common Enterprise Knowledge Management System:** Keep data authoritative and relational, Web 2.0, 3.0 enabled.
- **Measure the Performance:** Outcomes, Cost, Efficiency, Effectiveness, Risk Analysis, Process Improvement, Learning

## **B. National Health Regulatory Oversight and Governance (NHROG)**

- The NHROG authority would be empowered under a National Healthcare Reliability Act
- Would focus primarily on *oversight* of the development,

implementation, enforcement, and validation processes of "healthcare reliability standards" developed by the National Health Reliability Organization (NHRO).

- Ensure the stakeholders in the Health Sector fulfill their responsibilities in providing reliability of the Health Sector—quality, affordability, and accessibility.
- Health reliability standards impose requirements on stakeholders in the Health Sector that address beyond day to day "blue sky" operations to include preparedness for and response to “black sky days”—risks identified through Health Sector threat and hazard identification risk assessments (THIRA) and individual hazard and vulnerability assessments at the local, state, and regional level.

### **C. Proposed Federal Executive Oversight Council**

Staffs of these offices support process, projects, and proposals. If the commission lacks sufficient regulatory power, the HHS components would need to be considered to be given additional regulatory oversight investigation, and auditing authorities to ensure that industries and organizations do not pose threats to public safety or well-being.

- White House: National Economic Council (1), Domestic Policy Council (1), National Security Council (1)
- HHS (9): ASPR, ASH, FDA, NIH, NIAID, CDC, CMS, SG, ONCHIE
- DOD (2): ASDHA, TMA
- VHA
- DHS: CMO
- USDA
- DOC (NIST)
- DOJ
- State (MED)
- Ad hoc participants: National Center for Medical Intelligence (NCMI), DOJ/ FBI, DOL (OSHA), EPA, ODNI, NCTC, DOD Branch Surgeons General, Regional Combatant Commanders Command Surgeons
- **State/ Tribal/ Territorial Health Regulatory Oversight Authorities**
  - State Public Health organizations and agencies
  - Quarantine

- Professional licensing and monitoring authorities
- Emergency waiver process during disasters
- EMACs
- Prescription Monitoring
- Biohazardous Waste Handling and Transport
- EMS Systems
- County and City Health Departments

#### **D. National Health Reliability Organization (NHRO):**

- Mission: Ensure the reliability of healthcare sector to the American public with the triple aim of quality, affordability, and accessibility. This includes during response to predictable disasters.
- Vision: A national healthcare sector that unleashes the innovation and compassion of the American people working in the free-market economy to provide reliable healthcare to the nation.
- Purpose: Provide the Healthcare sector a structure for self-governance to provide reliability--quality healthcare that is affordable and accessible. The NHRO is answerable to oversight for standards development, implementation, compliance, and validation.
- Goals:
  - Ensure a reliable, resilient Health Sector able to meet the healthcare needs of the nation even under extreme conditions or circumstances
  - Drive innovation in healthcare to reduce costs, gain efficiencies, and improve individual and national health and wellness,
  - Recruit the next generation of researchers and healthcare providers that continue to innovate and provide compassionate, reliable healthcare.
- Includes Private Sector Organizations, Associations in membership
- **The Regional Disaster Healthcare Response System (RDHRS)** is the preparedness model of the nation's Healthcare System: Hospital or cluster of hospitals covering a defined catchment area that is integrated with community level critical sector partners including public works, public safety, energy, transportation, logistics, and all of the Medicare and Medicaid Participating Providers and

Suppliers

- Example from the Energy Sector: "North American Electric Reliability Corporation (NERC)"

**NHRO Lead Council**

- Chairman elected by Member Voters
- Executive Committee composed of NHRO Committee.
- \_\_\_\_\_Answers to the NHROG
- Reports to the Administration, Congress, Members, Customers
- Coordinates with Health Sector Coordinating Council (SCC)/ Government Coordinating Council (GCC)
- Administrative Support Staff (n=100's)
- Chartered with corporate governance processes, most work and output is done virtually.
- Public and External (inter-sector) Affairs

**Admin Support Staff and the Gateway**

- Gateway into the NHRO Environment
- Administrative support staff (n=100's) connected via the Portal Enterprise who manage the activities behind the scenes
- Help Desk for issues, topics, projects
- Virtual Emergency Operations Center, Incident management capability
- Information Sharing Analysis Center (ISAC)

**Members (Partners?)**

- Any organization engaged in meaningful aspects of healthcare or public health in the United States
  - Obligation to keep healthcare reliable–affordable, accessible, of good quality
  - Based on Mission, Purpose, Objectives, Activities
- Associations, Organizations, Professional Societies, Corporations, Hospitals

- All Members are characterized and "tagged" with specific traits for matching to "Alliances": Committees, Sub-committees, issues and projects
- Functional Mission and Purpose
- THIRA Risks
- The 10 Dimensions of National and Homeland Security Framework
- Financial (e.g., revenues, Profit/ non-profit)

## **Voters (Members?)**

- \_\_\_\_\_ Voters are members or employees of the Associations, Organizations, Hospitals, Corporations
- Voters retain one vote for each organization that they participate in that is a member of the NHRC.
- For hospitals and CMS Participating Providers and Suppliers, this includes staff members that are credentialed and privileged
- Note that many federal workers are voters through their professional associations
- Excludes unions

## **Committees and Subcommittees**

Committees mirror the oversight within the Federal departments and agencies for ONE Health and the components contributing to healthcare and public health.

- They further define oversight to streamline process, clarify roles, responsibilities, and authorities, and facilitate coordination across the sector and public private partnership (FHRC/ NHRC)
- Chairman of Committees sit on the NHRC Executive Committee
- Sub-committees may be formed to account for greater specificity of effort.
- Alliances, issues, and projects may work across committees and sub-committees
- Committees/ sub-committees may want to include separate but linked issues/ projects that are closely related

but look for different outcomes through the Forum.

- Committees are topic based and address issues that are interdependent. They use a matrixed approach to work issues and projects.

- Healthcare Coalitions and Systems

- Outcomes, Performance, and Learning

- Biosafety and Ethics

- Workforce

- Education, Training, Certifications

- Recruitment, Suitability, Career Progression

- Professional Ethics Compliance

- Implementation

- Compliance and Enforcement

- Global Health Security

- Food Safety and Security

- Drug Safety, Security, and Utilization

- Science and Technology Advancement

- Artificial Intelligence (AI) and Patient Interface

- Diagnostics

- Therapeutics

- Advanced Vaccine Development

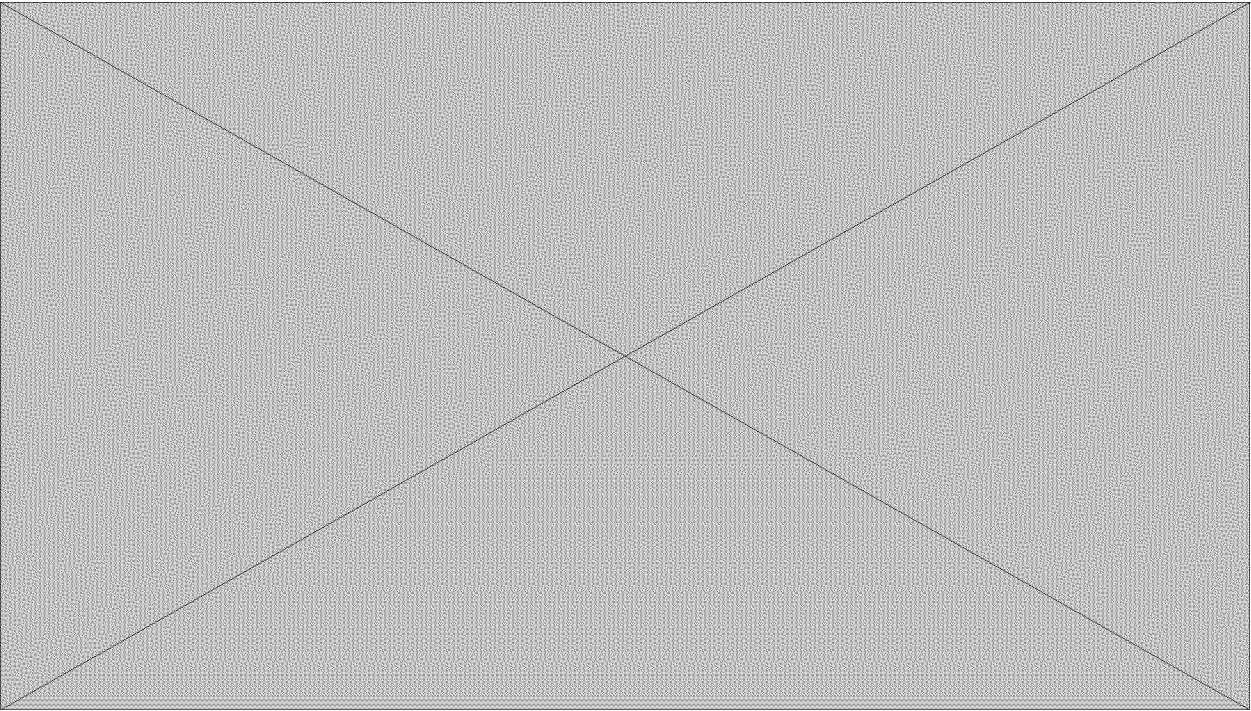
- Healthcare Economics

- Biodefense and National Security

- Preparedness and Response to All Hazards

- Health Information Technology and Data Exchanges





**Figure 2. Standards Setting Organization Function for the National Health Reliability Organization (NHRO)**

**E. Standards Development Process, Alliances, and Working Groups**

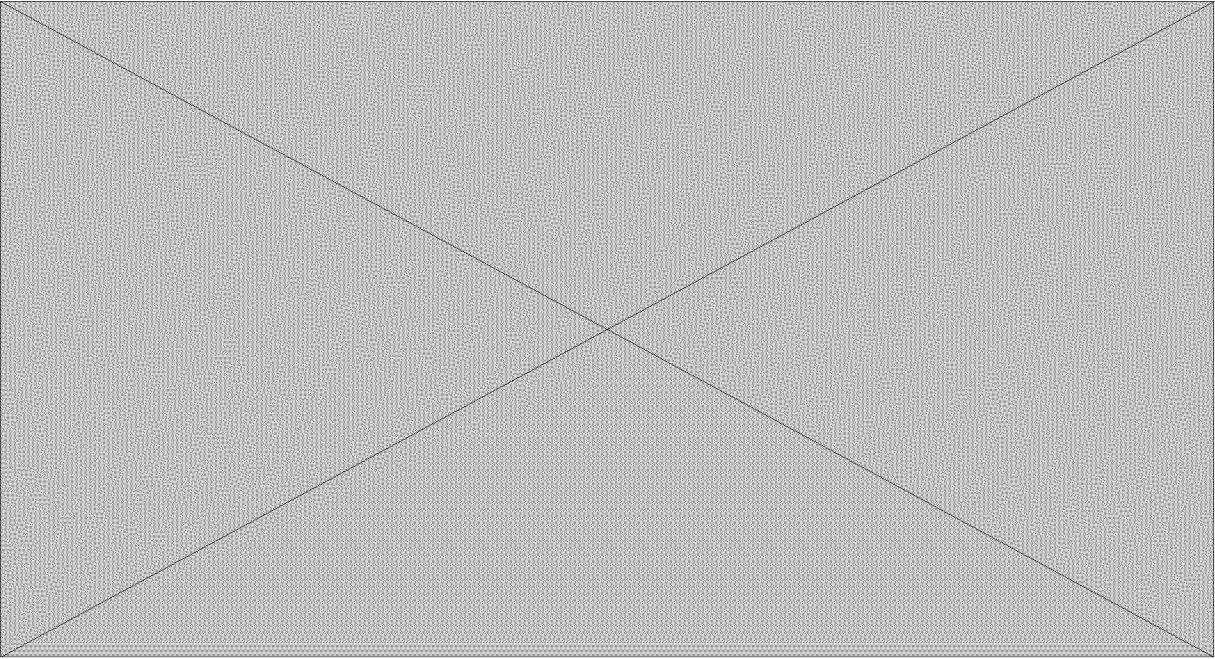
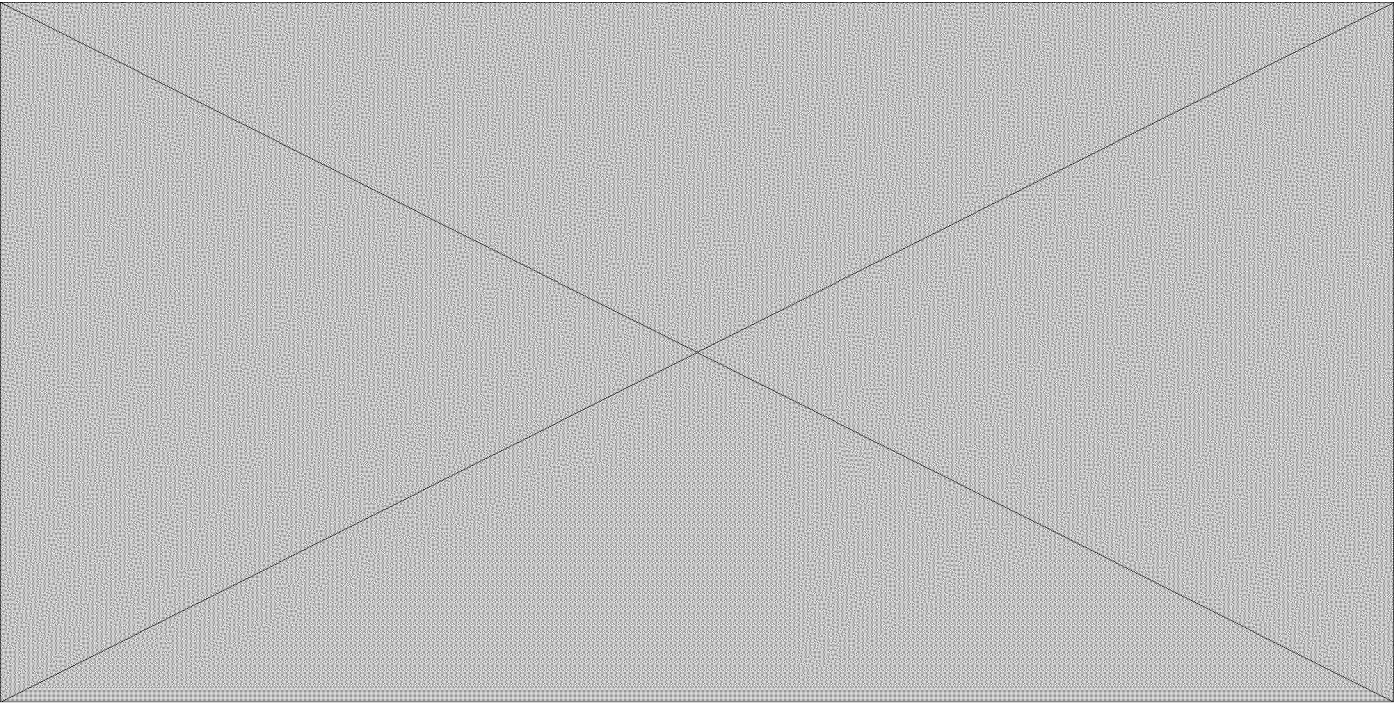
Alliances are determined by Issues or Projects, using members’ characterizations to identify who should participate.

- Requires a very detailed taxonomy and ontology of the healthcare system
- Relevance determines "mandatory" participants and "ad hoc".
  - Measurements and weighting factors identify significance of elements and their links and attachments to other elements to identify relevance for prioritization of attention and action level
  - Thresholds identify triggers and warning signaling or flags for attention to issues identified
  - Weighting factors employ fuzzy logic to capture various factors impacting relevance
  - Comprehensive [PowerPoint Presentation](#)
- Relationships
  - The system uses algorithms and smart humans using search to seek out common functions, objectives, activities,

tasks, roles, responsibilities, authorities that indicate synergies that should be matched, aligned, collaborative, or may offer ready-made solutions.

- "[Match.gov](#)"-like capability
  - Seeks to avoid redundant work, leverage good work already done, allow for crowd-sourcing issues for solutions.
  - Breaks through silos.
  - Interoperability, Dependency, Interdependency, Collaboration, Coordination
  - Personal relationships are promoted via gamification and use of avatars highlighting characteristics of users and leveraging the diversity of skill sets, talents, and experience, and characteristics
- Build great teams that express the diversity of personalities in the dramedy of the workplace
  - Mandatory participants are those with "skin in the game", primary expertise or operational relevance to the issue (including secondary relevance).
  - Operational Filters: Need to find all those with primary, secondary, tertiary interdependencies to consider the solutions
  - The systems are complex, non-linear, and dynamic over time
  - Solutions must be crowd-sourced (not group-think) to find single points of failure
  - The NHRC must measure outcomes across all healthcare coalitions to pick up indicators and warnings of failure points
  - Operational mandates: The sector must account for beyond the daily routine missions and be able to conduct operational response that is unified with FSLTT government efforts.
  - Solutions may also need to be customized to account for variables specific to or that have greater impact on different parts of the system.
  - For example, power outage requirements for air-conditioning in hospitals or nursing homes in the South during summer or heat in the North during winter.

**Figure 3. diagram displays the process for developing topical committees, multi-disciplinary representation, and standards development structure.**



F

**Figure 4 displays the sub-components of main topics, broken down further to critical sub-topics**

**F. Health Information Data Exchanges**

Health Information Data Exchanges (HIDE) represent a new, emergent sub-sector

- A cottage industry allowing for secure, private sharing of data and information to optimize the healthcare provided nationwide
- Data has intrinsic and extrinsic value. Big data has big value. Trash or treasure, who can use the data?

- Data sharing/ brokerages in support of the NHRC.
- Another analogous system is the National Weather Service--billions of dollars invested in weather stations, satellite systems, and computational science now allows very accurate characterization, forecasting, and prediction of local weather patterns and national impact.
- Internet of Things (IoT) will collect data. The integration of data layers will need to be explored to find meaningful information (improving quality, decreasing cost, increasing access to healthcare).
- Should be a part of the publication of medical journals consolidated into libraries (see "The Academy" below).
- Actuarial versus statistical data outcomes that include additional data layers (demographics, geo-spatial locations, time, geography...)
- Algorithms for search, treatment, research, surveillance,
- Registries (virtual and active) for disease processes, treatments, etc..

## **G. The Forum**

The Forum captures the business process "Rules of the Road" for addressing issues and projects using PNP Project Management Principles

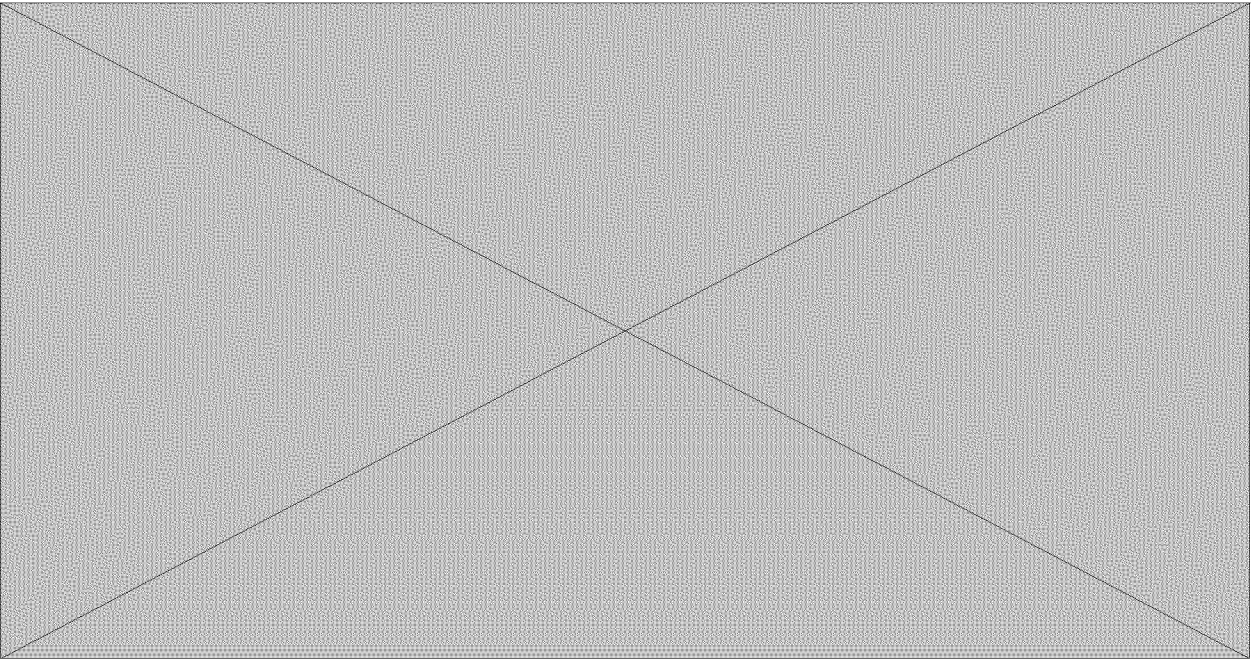
- Wiki collaboration capturing authoritative, relational data in netcentric operations style with smart push, pull
- Provides situational awareness and is transparent to the public
- Has an associated healthcare information/ data exchange for capturing and measuring outcomes
- Issues/ Projects can be specific to national, regional, state, county, community, healthcare coalition
- Captures progression of projects/ issues through 8 phases
  - Deconstruction: Identifying the issue in detail to irreducible complexity including manpower, organizational structure, requirements, equipment, training, exercises, assessments, maintenance (annual costs), sustainment (outyear costs)

It should all use a standard format that forces the details to be determined up front. This makes assessment and outcome metrics determination easier (or possible) later on.

- Assimilation: identifying relevant members to form the sub-

committee (alliance) and bring them together to work the issue/ project

- Construction:
- Adjudication
- Implementation
- Assessment
- Analysis
- Outcomes Reporting and Standards Development
- Output is a "Standard", "Practice", or appropriately titled solution that is presented back to the appropriate subcommittee/ committee for review and approval, then sent to the appropriate regulatory entity for review.
- Compliance: Ensures objectives of the project are being met and are aligned with Healthcare Reliability Standards



**Figure 5 displays the Forum process for Project Management and Workflow for development, implementation, and validation of standards, best practices, guidelines.**

**From:** \_\_\_\_\_ <cmecher@charter.net>

**Sent:** Friday, March 13, 2020 9:03 AM

To: \_\_\_\_\_

Cc: Subject: Re: Red Dawn Raging Start March 4

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

Virginia is developing its own coronavirus tests, and urged public schools to make their own decisions on whether to cancel classes. Loudoun County Public Schools will be closed through next week. Fairfax County, the region's largest school system, announced late Thursday that it would be closed Friday and was cancelling after-school activities and field trips through April 12; Fairfax schools were already slated to be closed Monday so staff could prepare to teach classes online if necessary.

-----

From: cmecher@charter.net

To: \_\_\_\_\_

Cc: "Dr Eva Lee", James V", "Dr. Eva K Lee", "CHRISTOPHER ALLEN", "Tom Bossert", Gerald W", "Richard Hatchett",David (DSHS)", Eric", Luciana", "Brian Benson", "Tracey McNamara", "Duane Caneva", Ralph S", Carter (VA.GOV)", Richard (OS/ASPR/EMMO)", THOMAS", "M.D.", "David", "Charity A@CDPH", "Gregory J", William (STATE.GOV)", CAMERON",

(OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", "Matthew J CIV USARMY (USA)", "Lisa Koonin", MELISSA", HERBERT", Alexander", MARIEFRED", "jwleduc@utmb.edu", Robert (OS/ASPR/BARDA)", Kevin", Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", David (Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", Dan", David", DAVID A", SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", "Ryan Morhard", "Steven Jt(tCHFStDPH)", Jerome (HHS/OASH)", Monique K.", Jessica (USDA.GOV)", "DC", "dannyschau@usuhs.edu", Jerome (CTR)", Jay J", Joselito", "Will Gaskins", "Kevin Montgomery", Linda L", "LLogandakar", "rajeev.venkayya@takeda.com"

Sent: Friday March 13 2020 7:10:30AM

Subject: Re: Red Dawn Raging Start March 4

+Rajeev

-----  
From: [cmecher@charter.net](mailto:cmecher@charter.net)

To: \_\_\_\_\_

Cc: "Dr. Eva Lee", James V", "Dr. Eva K Lee",  
"CHRISTOPHER ALLEN",  
"Tom Bossert", Gerald W", "Richard Hatchett", David  
(DSHS)", Eric", Luciana", "Brian Benson", "Tracey  
McNamara", "Duane Caneva", Ralph S", Carter (VA.GOV)",  
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HERBERT", Alexander", MARIEFRED",  
"[jwleduc@utmb.edu](mailto:jwleduc@utmb.edu)", Robert (OS/ASPR/BARDA)", Kevin",  
Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", David  
(Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", Dan",  
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Jt(tCHFS tDPH)", Jerome (HHS/OASH)", Monique K.",  
Jessica (USDA.GOV)", "DC", "[danny.shiau@usuhs.edu](mailto:danny.shiau@usuhs.edu)",  
Jerome (CTR)", Jay J", Joselito", "Will Gaskins", "Kevin  
Montgomery", Linda L", "LLogandakar"

Sent: Friday March 13 2020 7:09:26AM

Subject: Re: Red Dawn Raging Start March 4

This is what leadership looks like.

*“We whole-heartedly endorse the bold and decisive decisions of our Governor here today. This is not about a healthcare system; this is about all of us. We can all fight back against this virus, and in fact, we need to. The health care system can treat those who are ill; and across all of Maryland, we’re readying ourselves in case we need to. However, by putting aggressive steps in place that the Governor just outlined with regard to social distancing, closures of schools, teleworking – these are steps we can all adopt...the earlier we do this, the more layers we put in place, the less this virus can be transmitted. That’s the key.”* Dr. Marcozzi, at a [press conference](#) hosted by Governor Larry Hogan announcing major steps in the state of Maryland’s COVID-19 response. Those steps included

- Maryland Emergency Management Agency increase activation to highest level
- Activate national guard
- All state government is raised to elevated level 2 - all non-essential employees who can telework required

to do so

- Public access to state buildings restricted
- **No gatherings of more than 250+ people**  
(including sports and religious gatherings)
- All senior centers closed
- All state and local government buildings with more than 250+ people must follow social distancing
- Close cruise ship terminal in Baltimore
- Extension of expiration dates on permits including drivers licenses, license plates, professional licenses, until 30 days after end of state of emergency
- All hospitals adopt new visitor policies to stop spread of COVID-19
- All prisons will suspend visits
- All non-essential functions of government are now managed by Lt Gov Rutherford so Gov Hogan can focus solely on COVID-19

- **Monday, March 16 through Friday, March**

## **27 - all public schools closed**

- Measures taken to provide child care for essential workers/first responders

-----

From: [cmecher@charter.net](mailto:cmecher@charter.net)

To: "Dr. Eva Lee"

Cc: James V", "Dr. Eva K Lee", "CHRISTOPHER ALLEN",  
"Tom Bossert", Gerald W",  
"Richard Hatchett", David (DSHS)", Eric", Luciana", "Brian  
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CIV USARMY (USA)", "Lisa Koonin", MELISSA",  
HERBERT", Alexander", MARIEFRED",  
"jwleduc@utmb.edu", Robert (OS/ASPR/BARDA)", Kevin",  
Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", David  
(Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", Dan",  
David", DAVID A", SANGEETA", Scott  
(OS/ASPR/EMMO)", "Larry G", "Ryan Morhard", "Steven  
Jt(tCHFStDPH)", Jerome (HHS/OASH)", Monique K.",  
Jessica (USDA.GOV)", "DC", "danny.shiau@usuhs.edu",  
Jerome (CTR)", Jay J", Joselito", "Will Gaskins", "Kevin  
Montgomery", Linda L", "LLogandakar"

Sent: Thursday March 12 2020 10:30:31PM

Subject: Re: Red Dawn Raging Start March 4

<https://www.chicagotribune.com/coronavirus/ct-nw-coronavirus-united-states-school-closings-20200312-sh2d5vi525drvcf5dwm7hnebru-story.html>

Here is the list of states now closing schools. Add Kentucky too. Illinois had a press briefing and they are getting ready.

Getting close to the tipping point.

-----  
From: "Dr. Eva Lee"

To: James V"

Cc: "Dr. Eva K Lee",  
"CHRISTOPHER ALLEN",  
"Tom Bossert", Gerald W", "Richard Hatchett", David  
(DSHS)", Eric", Luciana", "Brian Benson", "Tracey  
McNamara", "Duane Caneva", Ralph S", Carter (VA.GOV)",  
Richard (OS/ASPR/EMMO)", THOMAS", "M.D.", "David",  
"Charity A@CDPH", "Gregory J", William (STATE.GOV)",  
CAMERON",

(OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", "Matthew J  
CIV USARMY (USA)", "Lisa Koonin", MELISSA",  
HERBERT", Alexander", MARIEFRED",  
"jwleduc@utmb.edu", Robert (OS/ASPR/BARDA)", Kevin",  
Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", David  
(Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", Dan",  
David", DAVID A", SANGEETA", Scott  
(OS/ASPR/EMMO)", "Larry G", "Ryan Morhard", "Steven  
Jt(tCHFStDPH)", Jerome (HHS/OASH)", Monique K.",  
Jessica (USDA.GOV)", "DC", "danny.shiau@usuhsedu",  
Jerome (CTR)", Jay J", Joselito", "Will Gaskins", "Kevin  
Montgomery", Linda L", "LLogandakar"

Sent: Thursday March 12 2020 9:45:09PM

Subject: Re: Red Dawn Raging Start March 4

This is great. WA is not quite fully, just partial. MA, CA, and NY should act immediately. They have big fire to fight.

Grocery store is very long line now (in Atlanta)! And shelves are very empty. Oh dear!

On Thu, Mar 12, 2020 at 9:14 PM Lawler, James V  
<[james.lawler@unmc.edu](mailto:james.lawler@unmc.edu)> wrote:

NE has its finger on the trigger. We will pull (regionally) as soon as we hit our threshold. Full NPI. We have great state leadership on this.

James Lawler, MD, MPH, FIDSA  
Director, International Programs & Innovation  
Global Center for Health Security, and  
Associate Professor of Medicine  
Division of Infectious Diseases  
University of Nebraska Medical Center

m:  
[james.lawler@unmc.edu](mailto:james.lawler@unmc.edu)

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**From:** \_\_\_\_\_  
**Sent:** Friday, March 13, 2020 4:00:38 AM  
**To:** \_\_\_\_\_  
**Cc:** 'Dr. Eva K Lee'  
'CHRISTOPHER ALLEN' 'Dr.  
Eva Lee' Lawler, James V  
<[james.lawler@unmc.edu](mailto:james.lawler@unmc.edu)>;  
'Tom Bossert'  
'Parker Jr, Gerald W'  
<[gparkers@cvm.tamu.edu](mailto:gparkers@cvm.tamu.edu)>; 'Richard Hatchett'  
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<[David.Gruber@dshs.texas.gov](mailto:David.Gruber@dshs.texas.gov)>; 'McDonald, Eric'  
<[Eric.McDonald@sdcounty.ca.gov](mailto:Eric.McDonald@sdcounty.ca.gov)>; 'Borio, Luciana'  
<[LBorio@iqt.org](mailto:LBorio@iqt.org)>; 'Brian Benson'

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 <duane.caneva@hq.dhs.gov>; 'Duane Caneva'  
 <rbaric@email.unc.edu>; 'Baric, Ralph S'  
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 <carter.mecher@va.gov>; 'Hunt, Richard  
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 'WILKINSON, THOMAS'  
 <THOMAS.WILKINSON@hq.dhs.gov>; 'M.D.'  
 <MVCALLAHAN@mgh.harvard.edu>; 'David'  
 <DMarcozzi@som.umaryland.edu>; 'Charity A@CDPH'  
 <Charity.Dean@cdph.ca.gov>; 'Gregory J'  
 <MartinGJ@state.gov>; 'Walters, William (STATE.GOV)'  
 <walterswa2@state.gov>; 'HAMILTON, CAMERON'  
 <cameron.hamilton@hq.dhs.gov>; \_\_\_\_\_  
 'Dodgen,tDanielt(OS/ASPR/SPPR)'  
 <Daniel.Dodgen@hhs.gov>; 'DeBord,Kristin  
 (OS/ASPR/SPPR)' <Kristin.DeBord@hhs.gov>; 'Phillips,  
 Sally (OS/ASPR/SPPR)' <Sally.Phillips@hhs.gov>; 'Matthew  
 J CIV USARMY (USA)' <matthew.j.hepburn.civ@mail.mil>;  
 'Lisa Koonin' <lagoonin1  
 'HARVEY,  
 MELISSA' <melissa.harvey@hq.dhs.gov>; 'WOLFE,  
 HERBERT' <HERBERTWOLFE@hq.dhs.gov>; 'Eastman,  
 Alexander' <alexander.eastman@hq.dhs.gov>; 'EVANS,  
 MARIEFRED' <mariefred.evans@associates.hq.dhs.gov>;  
 'jwleduc@utmb.edu' <jwleduc@utmb.edu>; 'Johnson, Robert  
 (OS/ASPR/BARDA)' <Robert.Johnson@hhs.gov>; 'Yeskey,  
 Kevin' <kevin.yeskey@hhs.gov>; 'Disbrow, Gary  
 (OS/ASPR/BARDA)' <Gary.Disbrow@hhs.gov>; 'Redd,  
 John (OS/ASPR/SPPR)' <John.Redd@hhs.gov>; 'Hassell,  
 David (Chris) (OS/ASPR/IO)' <David.Hassell@hhs.gov>;  
 'Hamel, Joseph (OS/ASPR/IO)' <Joseph.Hamel@hhs.gov>;  
 'Hanfling, Dan' <DHanfling@iq.t.org>; 'Wade, David'  
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 (OS/ASPR/EMMO)' <Scott.Lee@hhs.gov>; 'Larry G'  
 <PadgetLG@state.gov>; 'Ryan Morhard'  
 <Ryan.Morhard@weforum.org>; 'Steven Jt(tCHFStDPH)'  
 <steven.stack@ky.gov>; 'Adams, Jerome (HHS/OASH)'  
 <Jerome.Adams@hhs.gov>; 'Mansoura, Monique K.'  
 <mmansoura@mitre.org>; 'Fantinato, Jessica (USDA.GOV)'  
 <jessica.fantinato@usda.gov>; 'DC'  
 <michelle.colby@usda.gov>; 'danny.shiau@usuhs.edu'  
 <danny.shiau@usuhs.edu>; 'Cordts, Jerome (CTR)'  
 <jerome.cordts@associates.hq.dhs.gov>; 'Schnitzer, Jay J'  
 <jschnitzer@mitre.org>; 'Ignacio, Joselito'  
 <joselito.ignacio@fema.dhs.gov>; 'Will Gaskins'  
 <will.gaskins@efiia.com>; 'Kevin Montgomery'  
 <kevin@collaborate.org>; 'Logan, Linda L'  
 <llogan@cvm.tamu.edu>; 'LLogandakar'

**Subject:** RE: Red Dawn Raging Start March 4

Non-UNMC email

Pennsylvania Governor Wolf closes all schools, community centers, gyms, and entertainment venues in Montgomery County due to coronavirus - WPVI

Houston Independent School District, one of the largest in the U.S., closes all schools until March 30 due to coronavirus

So now we have: (1) MD; (2) OH; (3) GA; (4) PA; (5) TX

-----

From: [cmecher@charter.net](mailto:cmecher@charter.net)

To: "Dr. Eva K Lee"

Cc: "CHRISTOPHER ALLEN", "Dr. Eva Lee", James V",  
"Tom Bossert", Gerald W",  
"Richard Hatchett",David (DSHS)", Eric", Luciana", "Brian Benson", "Tracey McNamara", "Duane Caneva", Ralph S",  
Carter ([VA.GOV](http://VA.GOV))", Richard (OS/ASPR/EMMO)",  
THOMAS", "M.D.", "David", "Charity A@CDPH",  
"Gregory J", William ([STATE.GOV](http://STATE.GOV))", CAMERON",

(OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", "Matthew J CIV USARMY (USA)", "Lisa Koonin", MELISSA",  
HERBERT", Alexander", MARIEFRED",  
"[jwleduc@utmb.edu](mailto:jwleduc@utmb.edu)", Robert (OS/ASPR/BARDA)", Kevin",  
Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", David (Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", Dan",  
David", DAVID A", SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", "Ryan Morhard", "Steven Jt(tCHFStDPH)", Jerome (HHS/OASH)", Monique K.",  
Jessica ([USDA.GOV](http://USDA.GOV))", "DC", "[danny.shiau@usuhs.edu](mailto:danny.shiau@usuhs.edu)",  
Jerome (CTR)", Jay J", Joselito", "Will Gaskins", "Kevin Montgomery", Linda L", "LLogandakar"

Sent: Thursday March 12 2020 5:34:21PM

Subject: RE: Red Dawn Raging Start March 4

Georgia schools are closing now--Cobb County, Fulton County, Atlanta Public Schools (those are the big ones). I reached out to the superintendent early today and government leaders.

-----

From: "Dr. Eva K Lee"

To: "Carter Mecher"

Cc: "CHRISTOPHER ALLEN", "Dr. Eva Lee", James V",  
"Tom Bossert", Gerald W",  
"Richard Hatchett",David (DSHS)", Eric", Luciana", "Brian Benson", "Tracey McNamara", "Duane Caneva", Ralph S",  
Carter ([VA.GOV](http://VA.GOV))", Richard (OS/ASPR/EMMO)",

THOMAS", "M.D.", "David", "Charity A@CDPH",  
"Gregory J", William ([STATE.GOV](http://STATE.GOV)), CAMERON",

(OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", "Matthew J  
CIV USARMY (USA)", "Lisa Koonin", MELISSA",  
HERBERT", Alexander", MARIEFRED",  
"jwleduc@utmb.edu", Robert (OS/ASPR/BARDA)", Kevin",  
Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", David  
(Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", Dan",  
David", DAVID A", SANGEETA", Scott  
(OS/ASPR/EMMO)", "Larry G", "Ryan Morhard", "Steven  
Jt(tCHFStDPH)", Jerome (HHS/OASH)", Monique K.",  
Jessica ([USDA.GOV](http://USDA.GOV))", "DC", "[danny.shiau@usuhs.edu](mailto:danny.shiau@usuhs.edu)",  
Jerome (CTR)", Jay J", Joselito", "Will Gaskins", "Kevin  
Montgomery", Linda L", "LLogandakar"

Sent: Thursday March 12 2020 4:43:02PM

Subject: RE: Red Dawn Raging Start March 4

Great, even though it is one step at a time. By the way, I  
have discovered something uniformly true across all sites --  
when we saw the first case, we're exactly 2 weeks behind the  
disease spread already. It is very interesting. Hence I told  
David Marcozzi that a single case as a trigger is a good  
trigger, because that's when you know there're already many  
"unknown" ones circulating in the community. I saw the  
patterns now on many cites I think I made that statement  
already for quite many weeks. But it is interesting to see how  
beautiful those numbers line up. Oh, I just got off the phone  
with the Washington Post reporter. She wanted to talk to me  
a few days ago. Finally she got hold of me. I made a point  
that it is not one piecemeal action at a time. NPI (schools,  
workers, worships, events, etc) must be rolled out now so  
that we can put a brake on and benefit from the full effect.  
Otherwise, a little here and a little there won't make a dent.  
She asked me about politicians (who has read my models). I  
have no idea. Good that I have no head for that and I told  
her I would like her article to be factual and speak to the  
American people and also perhaps speak to the leaders too so  
they can all work together with one common goal -- beat the  
virus and stay ahead of it instead of chasing after it with little  
batches. Don't know what she would write, but she seems  
quite interested in the work.

[[newton.isye.gatech.edu](http://newton.isye.gatech.edu)]  
[[newtonisye.gatech.edu](http://newtonisye.gatech.edu)]<https://newton.isyegatech.edu/DrLee>  
/ [[newton.isye.gatech.edu](http://newton.isye.gatech.edu)]

mobile:

Sent with ProtonMail [protonmail.com] Secure Email.

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On Thursday, March 12, 2020 4:17 PM, Carter Mecher  
\_\_\_\_\_ wrote:

Ohio closing schools.

**Ohio schools to close for 3 weeks during coronavirus ‘crisis;’ Gov. DeWine bans gatherings of more than 100 people**

Georgia not mandating but asking districts to consider.

There is no Rupert Blue among any of the Federal leaders. It must come from the states and the Governors.

Sent from Mail [go.microsoft.com] for Windows 10

**From:** CHRISTOPHER ALLEN

**Sent:** Thursday, March 12, 2020 3:03 PM

**To:** Carter Mecher; Dr. Eva Lee; Lawler, James V;

**Cc:** Dr. Eva K Lee; Tom Bossert; Parker Jr, Gerald W; Richard Hatchett; Gruber,David (DSHS); McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Duane Caneva; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON;

Dodgen,tDanielt(OS/ASPR/SPPR); DeBord,Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Hanfling, Dan; Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH ); Adams, Jerome (HHS/OASH); Mansoura, Monique K.; Fantinato, Jessica (USDA.GOV); DC; danny.shiau@usuhs.edu; Cordts, Jerome (CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; Kevin Montgomery; Logan, Linda L; LLogandakar

**Subject:** Re: Red Dawn Raging Start March 4

Eva, Carter, James - All

Understanding that we are in the heat of the battle - wanted to share the attached with the thinking of equating the timing of response (federal/state/local)

with economic cost. The ability to model trajectories based on the attached model or perhaps something similar might more fully inform the timing of response activities in order to strike a balance between responding to early vs. responding to late - pro-active data driven decision making vs. reactive.

This model was developed during H1N1 and derived from a variant similarly applied post 911 activities.

Best,

Chris Allen

Chief IT Officer (ret)

Department of Homeland Security

(m)

---

**From:** Carter Mecher  
**Sent:** Thursday, March 12, 2020 2:28 PM  
**To:** Dr. Eva Lee <eva.evalee.Lawler, James V <james.lawler@unmc.edu>  
**Cc:** Dr. Eva K Lee Tom Bossert Parker Jr, Gerald W <gparker@cvm.tamu.edu>; Richard Hatchett <richard.hatchett@cepi.net>; Gruber,David (DSHS) <David.Gruber@dshs.texas.gov>; McDonald, Eric <Eric.McDonald@sdcounty.ca.gov>; Borio, Luciana <LBorio@iqt.org>; Brian Benson Tracey McNamara <tmcNamara@westernu.edu>; Duane Caneva <duane.caneva@hq.dhs.gov>; Baric, Ralph S <rbaric@email.unc.edu>; Mecher, Carter (VA.GOV) <cartermecher@va.gov>; Hunt, Richard (OS/ASPR/EMMO) <Richard.Hunt@hhs.gov>; WILKINSON, THOMAS <THOMAS.WILKINSON@hq.dhs.gov>; M.D. <MVCALLAHAN@mgh.harvard.edu>; David <DMarcozzi@som.umaryland.edu>; Charity A@CDPH <Charity.Dean@cdph.ca.gov>; Gregory J



<MartinGJ@state.gov>; Walters, William  
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HAMILTON, CAMERON  
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---

Dodgen,tDanielt(OS/ASPR/SPPR)  
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Scott (OS/ASPR/EMMO) <Scott.Lee@hhs.gov>;  
Larry G <PadgetLG@state.gov>; Ryan Morhard  
<Ryan.Morhard@weforum.org>; Steven  
Jt(tCHFS tDPH) <steven.stack@ky.gov>; Adams,  
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Fantinato, Jessica (USDA.GOV)  
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<michelle.colby@usda.gov>; danny.shiau@usuhs.edu  
<danny.shiau@usuhs.edu>; Cordts, Jerome (CTR)  
<jerome.cordts@associates.hq.dhs.gov>; Schnitzer,  
Jay J <jschnitzer@mitre.org>; Ignacio, Joselito  
<joselito.ignacio@fema.dhs.gov>; Will Gaskins  
<will.gaskins@efiia.com>; CHRISTOPHER ALLEN  
Kevin Montgomery  
<kevin@collaborate.org>; Logan, Linda L  
<llogan@cvm.tamu.edu>; LLogandakar

**Subject:** RE: Red Dawn Raging Start March 4

[[nejm.org](http://nejm.org)]  
[[nejm.org](http://nejm.org)] <https://www.nejm.org/doi/full/10.1056/NEJMc2003717?query=RP> [[nejm.org](http://nejm.org)]

Detection of Covid-19 in Children in Early January  
2020 in Wuhan, China

This study showed that Covid-19 occurred in children, causing moderate-to-severe respiratory illness, in the early phase of the SARS-CoV-2 outbreak in Wuhan and was associated with ICU admission in one patient. None of the patients or their family members had had direct exposure to Huanan Seafood Wholesale Market (the initial location to which cases of Covid-19 were linked) or to one another. It is worth mentioning that we unexpectedly found a case of Covid-19 in one patient (Patient 3) who resided outside Wuhan; this patient had illness onset on January 2, 2020. The patient and her family were residents of the Yangxin area of Huangshi and had not traveled outside the city in the month before illness onset. We have not identified the source of infection for this patient. Our findings indicate that SARS-CoV-2 infections in children were occurring early in the epidemic.

Sent from Mail [go.microsoft.com] for Windows 10

**From:** Carter Mecher

---

**Sent:** Thursday, March 12, 2020 1:53 PM

**To:** Dr. Eva Lee; Lawler, James V

**Cc:** Dr. Eva K Lee; Tom Bossert; Parker Jr, Gerald W; Richard Hatchett; Gruber,David (DSHS); McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Duane Caneva; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON; rjglassjr@gmailcom; Dodgen,tDanielt(OS/ASPR/SPPR); DeBord,Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Hanfling, Dan; Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH ); Adams, Jerome (HHS/OASH); Mansoura, Monique K.; Fantinato, Jessica (USDA.GOV); DC; danny.shiau@usuhs.edu;

Cordts, Jerome (CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; CHRISTOPHER ALLEN; Kevin Montgomery; Logan, Linda L; LLogandakar

**Subject:** RE: Red Dawn Raging Start March 4

On a different note, I realized we were sitting on top of some really useful data in terms hospital lengths of stay. I have been tracking hospital data on Hubei since the beginning. Each day Hubei provides the current number of patients in the hospital (hospital census) with a break down by condition (serious and critical). If I sum the daily hospital census, I have a count of total BDOCs. I can do that for all hospitalized patients and also those who are critical (assuming those represent ICU patients). For the hospitalized patients, I can divide the total BDOCs by the cumulative number of confirmed cases and estimate a hospital LOS (the average is 16 days). The ICU is a bit trickier. I assumed that 5% of the confirmed cases would require ICU care. So divide the total ICU BDOCs by the cumulative confirmed cases multiplied by 5%. The average ICU LOS is 16 days. See below. Eva and Nathaniel, you might to use these numbers. These are probably the best numbers we can find.

|         | Hubei COVID-19 Confirmed |              |              |          |
|---------|--------------------------|--------------|--------------|----------|
| Date    | Total Current Inpatients | Mild Disease | Severely Ill | Critical |
| 1/14/20 | 6                        |              | 6            |          |

|         |     |     |     |    |
|---------|-----|-----|-----|----|
|         |     |     |     |    |
| 1/15/20 | 5   |     | 5   |    |
| 1/16/20 | 5   |     | 5   |    |
| 1/17/20 | 8   |     | 8   |    |
| 1/18/20 | 136 | 100 | 33  | 3  |
| 1/19/20 | 170 | 126 | 35  | 9  |
| 1/20/20 | 239 | 176 | 51  | 12 |
| 1/21/20 |     |     |     |    |
| 1/22/20 | 399 | 304 | 71  | 24 |
| 1/23/20 | 494 | 365 | 106 | 23 |
| 1/24/20 | 658 | 472 | 129 | 57 |

|         |       |       |       |     |
|---------|-------|-------|-------|-----|
|         |       |       |       |     |
| 1/25/20 | 915   |       | 221   |     |
| 1/26/20 | 1,645 | 1,013 | 563   | 69  |
| 1/27/20 | 2,567 | 1,877 | 563   | 127 |
| 1/28/20 | 3,349 | 2,450 | 671   | 228 |
| 1/29/20 |       | 3,346 | 711   | 277 |
|         | 4,334 |       |       |     |
| 1/30/20 | 5,486 | 4,392 | 804   | 290 |
| 1/31/20 | 6,738 | 5,444 |       | 338 |
|         |       |       | 956   |     |
| 2/1/20  | 8,565 | 7,003 | 1,118 | 444 |

|        |        |        |       |       |
|--------|--------|--------|-------|-------|
| 2/2/20 | 9,618  | 7,917  | 1,223 | 478   |
| 2/3/20 | 10,990 | 8,857  | 1,557 | 576   |
| 2/4/20 | 12,627 | 10,107 | 1,809 | 711   |
| 2/5/20 | 14,314 | 11,230 | 2,328 | 756   |
| 2/6/20 | 15,804 | 11,802 | 3,161 | 841   |
| 2/7/20 | 19,835 | 14,640 | 4,188 | 1,007 |
| 2/8/20 | 20,993 | 15,746 | 4,093 | 1     |

|         |        |        |       |       |
|---------|--------|--------|-------|-------|
|         |        |        |       | 154   |
| 2/9/20  | 22,160 | 16,655 | 4,269 | 1,236 |
| 2/10/20 | 25,087 | 18,743 | 5,046 | 1,298 |
| 2/11/20 | 26,121 | 18,880 | 5,724 | 1,517 |
| 2/12/20 | 33,693 | 26,609 | 5,647 | 1,437 |
| 2/13/20 | 36,719 | 27,081 | 7,953 | 1,685 |
| 2/14/20 | 38,107 | 27,955 | 8,276 | 1,876 |

|         |        |        |       |       |  |
|---------|--------|--------|-------|-------|--|
|         |        |        |       |       |  |
| 2/15/20 | 39,447 | 29,051 | 8,439 | 1,957 |  |
| 2/16/20 | 40,814 | 31,017 | 8,024 | 1,773 |  |
| 2/17/20 | 41,957 | 30,987 | 9,117 | 1,853 |  |
| 2/18/20 | 43,471 | 32,225 | 9,289 | 1,957 |  |
| 2/19/20 | 43,745 | 32,567 | 9,128 | 2,050 |  |
| 2/20/20 | 42,056 | 31,059 | 8,979 | 2,018 |  |
| 2/21/20 | 41,036 | 30,144 |       | 2,49  |  |



|         |        |        |       |       |
|---------|--------|--------|-------|-------|
|         |        |        | 8,400 | 2     |
| 2/22/20 | 40,127 | 29,429 | 8,853 | 1,845 |
| 2/23/20 | 39,073 | 29,643 | 7,776 | 1,654 |
| 2/24/20 | 37,896 | 29,221 | 7,090 | 1,585 |
| 2/25/20 | 36,242 | 27,916 | 6,840 | 1,486 |
| 2/26/20 | 34,978 | 26,994 | 6,581 | 1,403 |
| 2/27/20 | 32,878 | 25,245 | 6,270 | 1,363 |
| 2/28/20 | 31,064 | 23,694 | 6,056 | 1,3   |

|         |        |        |       |       |
|---------|--------|--------|-------|-------|
|         |        |        |       | 14    |
| 2/29/20 | 28,912 | 21,805 | 5,858 | 1,249 |
| 3/1/20  | 26,901 | 20,029 | 5,646 | 1,226 |
| 3/2/20  | 25,050 | 18,457 | 5,407 | 1,186 |
| 3/3/20  | 23,039 | 16,807 | 5,095 | 1,137 |
| 3/4/20  | 20,765 | 14,977 | 4,747 | 1,041 |
| 3/5/20  | 19,758 | 14,170 | 4,592 | 996   |
| 3/6/20  | 18,518 | 13,159 | 4,395 | 96    |

|             |           |        |       |        |
|-------------|-----------|--------|-------|--------|
|             |           |        |       | 4      |
| 3/7/20      | 17,078    | 11,938 | 4,206 | 934    |
| 3/8/20      |           |        | 4,101 | 890    |
|             | 15,826    | 10,835 |       |        |
| 3/9/20      | 14,957    | 10,256 | 3,855 | 846    |
| 3/10/20     | 13,712    | 9,300  | 3,613 | 799    |
| 3/11/20     | 12,769    | 8,589  | 3,453 | 727    |
| Total BDOCs | 1,103,287 |        |       | 53,194 |
| LOS         | 16        |        |       | 16     |

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**From:** Dr. Eva Lee

**Sent:** Thursday, March 12, 2020 1:28 PM

**To:** Lawler, James V

**Cc:** Carter Mecher; Dr. Eva K Lee; Tom Bossert; Parker Jr, Gerald W; Richard Hatchett; Gruber,David (DSHS); McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Duane Caneva; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON; Dodgen,tDanielt(OS/ASPR/SPPR); DeBord,Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Hanfling, Dan; Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH ); Adams, Jerome (HHS/OASH); Mansoura, Monique K.; Fantinato, Jessica (USDA.GOV); DC; danny.shiau@usuhs.edu; Cordts, Jerome (CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; CHRISTOPHER ALLEN; Kevin Montgomery; Logan, Linda L; LLogandakar

**Subject:** Re: Red Dawn Raging Start March 4

Yes, very very sad -- it's all the planning and we must execute and we can't execute!

On Thu, Mar 12, 2020 at 1:22 PM Lawler, James V <james.lawler@unmc.edu> wrote:

We are making every misstep leaders initially made in table-tops at the outset of pandemic planning in 2006. We had systematically addressed all of these and had a plan that would work – and has worked in Hong Kong/Singapore. We have thrown 15 years of institutional learning out the window and are making decisions based on intuition.

Pilots can tell you what happens when a crew makes decisions based on intuition rather than what their instruments are telling them

And we continue to push the stick forward...

**James Lawler, MD, MPH, FIDSA**

m:

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**From:** Carter Mecher

**Date:** Thursday, March 12, 2020 at 8:08 PM

**To:** "Dr. Eva K Lee"

**Cc:** "Lawler, James V" <[james.lawler@unmc.edu](mailto:james.lawler@unmc.edu)>, Tom Bossert "Parker Jr, Gerald W" <[gparker@cvm.tamu.edu](mailto:gparker@cvm.tamu.edu)>, Richard Hatchett <[richard.hatchett@cepi.net](mailto:richard.hatchett@cepi.net)>, "Gruber, David (DSHS)" <[David.Grubert@dshs.texas.gov](mailto:David.Grubert@dshs.texas.gov)>, "Dr. Eva Lee" <[eva.evalee@unmc.edu](mailto:eva.evalee@unmc.edu)>, "McDonald, Eric" <[Eric.McDonald@sdcountry.ca.gov](mailto:Eric.McDonald@sdcountry.ca.gov)>, "Borio, Luciana" <[LBorio@iqit.org](mailto:LBorio@iqit.org)>, Brian Benson

Tracey McNamara

<[tmcNamara@westernu.edu](mailto:tmcNamara@westernu.edu)>, Duane Caneva <[duane.caneva@hq.dhs.gov](mailto:duane.caneva@hq.dhs.gov)>, "Baric, Ralph S" <[rbaric@email.unc.edu](mailto:rbaric@email.unc.edu)>, "Mecher, Carter (VA.GOV [va.gov])" <[carter.mecher@va.gov](mailto:carter.mecher@va.gov)>, "Hunt, Richard (OS/ASPR/EMMO)" <[Richard.Hunt@hhs.gov](mailto:Richard.Hunt@hhs.gov)>, "WILKINSON, THOMAS" <[THOMAS.WILKINSON@hq.dhs.gov](mailto:THOMAS.WILKINSON@hq.dhs.gov)>, "Callahan, m" <[MVCALLAHAN@mg.harvard.edu](mailto:MVCALLAHAN@mg.harvard.edu)>, David <[DMarcozzi@som.umaryland.edu](mailto:DMarcozzi@som.umaryland.edu)>, "Charity A@CDPH" <[Charity.Dean@cdph.ca.gov](mailto:Charity.Dean@cdph.ca.gov)>, Gregory J <[MartinGJ@state.gov](mailto:MartinGJ@state.gov)>, "Walters, William (STATE.GOV [state.gov])" <[walterswa2@state.gov](mailto:walterswa2@state.gov)>, "HAMILTON, CAMERON" <[cameron.hamilton@hq.dhs.gov](mailto:cameron.hamilton@hq.dhs.gov)>,

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"Dodgen, Daniel (OS/ASPR/SPPR)" <[DanielDodgen@hhs.gov](mailto:DanielDodgen@hhs.gov)>, "DeBord, Kristin (OS/ASPR/SPPR)" <[Kristin.DeBord@hhs.gov](mailto:Kristin.DeBord@hhs.gov)>, "Phillips, Sally (OS/ASPR/SPPR)" <[Sally.Phillips@hhs.gov](mailto:Sally.Phillips@hhs.gov)>, "Matthew J CIV USARMY (USA)" <[matthew.j.hepburn.civ@mail.mil](mailto:matthew.j.hepburn.civ@mail.mil)>, Lisa Koonin <[lkoonin1@hhs.gov](mailto:lkoonin1@hhs.gov)>, "HARVEY, MELISSA" <[melissa.harvey@hq.dhs.gov](mailto:melissa.harvey@hq.dhs.gov)>, "WOLFE, HERBERT" <[HERBERT.WOLFE@hq.dhs.gov](mailto:HERBERT.WOLFE@hq.dhs.gov)>, "Eastman, Alexander" <[alexander.eastman@hq.dhs.gov](mailto:alexander.eastman@hq.dhs.gov)>, "EVANS, MARIEFRED" <[mariefred.evans@associates.hq.dhs.gov](mailto:mariefred.evans@associates.hq.dhs.gov)>, "jwleduc@utmb.edu" <[jwleduc@utmb.edu](mailto:jwleduc@utmb.edu)>, "Johnson, Robert (OS/ASPR/BARDA)" <[Robert.Johnson@hhs.gov](mailto:Robert.Johnson@hhs.gov)>, "Yeskey, Kevin" <[kevin.yeskey@hhs.gov](mailto:kevin.yeskey@hhs.gov)>, "Disbrow, Gary (OS/ASPR/BARDA)" <[Gary.Disbrow@hhs.gov](mailto:Gary.Disbrow@hhs.gov)>, "Redd, John (OS/ASPR/SPPR)" <[John.Redd@hhs.gov](mailto:John.Redd@hhs.gov)>, "Hassell, David (Chris) (OS/ASPR/IO)" <[David.Hassell@hhs.gov](mailto:David.Hassell@hhs.gov)>, "Hamel, Joseph (OS/ASPR/IO)" <[Joseph.Hamel@hhs.gov](mailto:Joseph.Hamel@hhs.gov)>, Dan Hanfling <[DHanfling@iqit.org](mailto:DHanfling@iqit.org)>, "Wade, David"

---

<david.wade@hq.dhs.gov>, "TARANTINO, DAVID A" <david.atarantino@cbp.dhs.gov>, "KAUSHIK, SANGEETA" <sangeeta.kaushik@hq.dhs.gov>, "Lee, Scott (OS/ASPR/EMMO)" <Scott.Lee@hhs.gov>, Larry G <PadgetLG@state.gov>, Ryan Morhard <Ryan.Morhard@weforum.org>, "Steven Jt(tCHFStDPH)" <steven.stack@ky.gov>, "Adams, Jerome (HHS/OASH)" <Jerome.Adams@hhs.gov>, "Mansoura, Monique K." <mmansoura@mitre.org>, "Fantinato, Jessica (USDA.GOV [usda.gov])" <jessica.fantinato@usda.gov>, DC <michelle.colby@usda.gov>, "danny.shiau@usuhs.edu" <danny.shiau@usuhs.edu>, "Cordts, Jerome (CTR)" <jerome.cordts@associates.hq.dhs.gov>, "Schnitzer, Jay J" <jschnitzer@mitreorg>, "Ignacio, Joselito" <joselito.ignacio@fema.dhs.gov>, Will Gaskins <will.gaskins@efia.com>, CHRISTOPHER ALLEN Kevin Montgomery <kevin@collaborate.org>, "Logan, Linda L" <llogan@cvm.tamu.edu>, LLogandakar

**Subject:** RE: Red Dawn Raging Start March 4

Non-UNMC email

This coming Saturday will mark two weeks since the first death in the US. On Saturday (likely by then we will have ~2,500 cases and 75 deaths given the current trajectory), ask yourself, what do you wish we would have done 2 weeks earlier on Feb 29? I don't think shutting down travel with Europe would have made the list. If you can answer that question truthfully now, then what are we waiting for?

Sent from Mail [go.microsoft.com] for Windows 10

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**From:** Dr. Eva K Lee

**Sent:** Thursday, March 12, 2020 12:54 PM

**To:** Carter Mecher

**Cc:** Lawler, James V; Tom Bossert; Parker Jr, Gerald W; Richard Hatchett; Gruber, David (DSHS); Dr. Eva Lee; McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Duane Caneva; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON;

Dodgen, tDaniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Hanfling, Dan; Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH ); Adams, Jerome (HHS/OASH); Mansoura, Monique K.; Fantinato, Jessica (USDA.GOV); DC; danny.shiau@usuhs.edu; Cordts, Jerome (CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; CHRISTOPHER ALLEN; Kevin Montgomery; Logan, Linda L; LLogandakar

**Subject:** RE: Red Dawn Raging Start March 4

Oh, I just heart that DC business is closing and do tele-work, and no church services. Are they not real? And I also heard more governors are "banning" large gatherings. I thought it's in the news. Are they not? I was with a reporter and hence didn't see anything. Some reporters wanted to speak to me on covid-19 models. I didn't agree for a few days but today I have spoken to some. Washington post is going to call me.

I thought everyone has put on a brake, so it's only my imagination? Too bad.

[[newton.isye.gatechedu](https://newton.isye.gatech.edu)]<https://newton.isye.gatech.edu>  
/DrLee/ [[newton.isye.gatech.edu](https://newton.isye.gatech.edu)]  
[[newton.isye.gatech.edu](https://newton.isye.gatech.edu)]

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On Thursday, March 12, 2020 12:49 PM, Carter Mecher \_\_\_\_\_ wrote:

We haven't applied the brakes. We took it off cruise control and that is about it.

Sent from [Mail \[go.microsoft.com\]](mailto:Mail [go.microsoft.com]) for Windows 10

---

**From:** [Dr. Eva K Lee](#)

**Sent:** Thursday, March 12, 2020 12:45 PM

**To:** [Carter Mecher](#)

**Cc:** [Lawler, James V](#); [Tom Bossert](#); [Parker Jr, Gerald W](#); [Richard Hatchett](#); [Gruber, David \(DSHS\)](#); [Dr. Eva Lee](#); [McDonald, Eric](#); [Borio, Luciana](#); [Brian Benson](#); [Tracey McNamara](#); [Duane Caneva](#); [Baric, Ralph S](#); [Mecher, Carter \(VA.GOV\)](#); [Hunt, Richard \(OS/ASPR/EMMO\)](#); [WILKINSON, THOMAS; M.D.](#); [David](#); [Charity A@CDPH](#); [Gregory J](#); [Walters, William \(STATE.GOV\)](#); [HAMILTON, CAMERON](#); [Dodgen,](#)



Daniel(OS/ASPR/SPPR); DeBord,Kristin  
(OS/ASPR/SPPR); Phillips, Sally  
(OS/ASPR/SPPR); Matthew J CIV USARMY  
(USA); Lisa Koonin; HARVEY, MELISSA;  
WOLFE, HERBERT; Eastman, Alexander;  
EVANS, MARIEFRED; jwleduc@utmb.edu;  
Johnson, Robert (OS/ASPR/BARDA); Yeskey,  
Kevin; Disbrow, Gary (OS/ASPR/BARDA);  
Redd, John (OS/ASPR/SPPR); Hassell, David  
(Chris) (OS/ASPR/IO); Hamel, Joseph  
(OS/ASPR/IO); Hanfling, Dan; Wade, David;  
TARANTINO, DAVID A; KAUSHIK,  
SANGEETA; Lee, Scott (OS/ASPR/EMMO);  
Larry G; Ryan Morhard; Steven Jt(tCHFStDPH  
) ; Adams, Jerome (HHS/OASH); Mansoura,  
Monique K.; Fantinato, Jessica (USDA.GOV);  
DC; danny.shiau@usuhs.edu; Cordts, Jerome  
(CTR); Schnitzer, Jay J; Ignacio, Joselito; Will  
Gaskins; CHRISTOPHER ALLEN; Kevin  
Montgomery; Logan, Linda L; LLogandakar

**Subject:** RE: Red Dawn Raging Start March 4

yes the brake is on, and that's all good.  
Healthcare providers are cirital to protect  
them.. We must because those resources are  
precious and we will need all of them as we see  
more severe cases But if all brakes are on, we  
can slow down the infection so we can address  
the hospital issues.

[urldefensecom]  
[newton.isye.gatech.edu]https://newton.isye.gate  
ch.edu/DrLee/ [newton.isye.gatech.edu]  
[newton.isye.gatech.edu]

mobile:

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On Thursday, March 12, 2020 10:14 AM, Carter Mecher \_\_\_\_\_ wrote:

Good news.

Princess Cruises says it is pausing all operations for 2 months after two of their ships were at the center of coronavirus outbreaks.

I have six kids. My youngest is a senior at UGA. He is home on spring break and UGA announced that school will remain closed until at least April 8<sup>th</sup>.

My sense is that colleges and universities across the US will be closing down since they do not present the same issues as K-12 (school meals and adult absenteeism related to child minding). There are 19M colleges students in the US—so an important piece. Then add in the employees and staff at colleges who now are working in an effectively socially-distanced workplace. There are nearly 60M kids attending K-12. 17M of those are home schooled (so they are already

taken care of). We are having conversations with the private schools (5.8M students). The private schools seem much more amenable to closure and are already doing so. There are 50.6 M kids attending public school K-12. We are shrinking the problem. Has anyone in public health asked a simple question? If you look at state and local government employees, the majority work for education. Any idea what % are high risk (age>60)? We looked in VA with 400K employees (17% of our employee are age>60). A significantly higher % of our physicians are >60.

Sent from Mail [[go.microsoft.com](mailto:go.microsoft.com)] for Windows 10

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**From:** Carter Mecher

**Sent:** Thursday, March 12, 2020 9:02 AM

**To:** Lawler, James V; Tom Bossert; Parker Jr, Gerald W

**Cc:** Richard Hatchett; Dr. Eva K Lee; Gruber,David (DSHS); Dr. Eva Lee; McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Duane Caneva; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON; Dodgen, Daniel (OS/ASPR/SPPR); DeBord,Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Hanfling, Dan; Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan

Morhard; Steven Jt(tCHFStDPH );  
Adams, Jerome (HHS/OASH); Mansoura,  
Monique K.; Fantino, Jessica  
(USDA.GOV); DC;  
danny.shiau@usuhs.edu; Cordts, Jerome  
(CTR); Schnitzer, Jay J; Ignacio, Joselito;  
Will Gaskins; CHRISTOPHER ALLEN;  
Kevin Montgomery; Logan, Linda L;  
LLogandakar

**Subject:** RE: Red Dawn Raging Start  
March 4

Attached is the household data. Would  
ask others to review to doublecheck.

Sent from Mail [go.microsoft.com] for  
Windows 10

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**From:** Carter Mecher

**Sent:** Thursday, March 12, 2020 8:58 AM

**To:** Lawler, James V; Tom Bossert;  
Parker Jr, Gerald W

**Cc:** Richard Hatchett; Dr. Eva K Lee;  
Gruber,David (DSHS); Dr. Eva Lee;  
McDonald, Eric; Borio, Luciana; Brian  
Benson; Tracey McNamara; Duane  
Caneva; Baric, Ralph S; Mecher, Carter  
(VA.GOV); Hunt, Richard  
(OS/ASPR/EMMO); WILKINSON,  
THOMAS; M.D.; David; Charity  
A@CDPH; Gregory J; Walters, William  
(STATE.GOV); HAMILTON,  
CAMERON;  
Dodgen, Daniel (OS/ASPR/SPPR);  
DeBord,Kristin (OS/ASPR/SPPR);  
Phillips, Sally (OS/ASPR/SPPR);  
Matthew J CIV USARMY (USA); Lisa  
Koonin; HARVEY, MELISSA; WOLFE,  
HERBERT; Eastman, Alexander;  
EVANS, MARIEFRED;  
jwleduc@utmb.edu; Johnson, Robert  
(OS/ASPR/BARDA); Yeskey, Kevin;  
Disbrow, Gary (OS/ASPR/BARDA);  
Redd, John (OS/ASPR/SPPR); Hassell,  
David (Chris) (OS/ASPR/IO); Hamel,  
Joseph (OS/ASPR/IO); Hanfling, Dan;  
Wade, David; TARANTINO, DAVID A;

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KAUSHIK, SANGEETA; Lee, Scott  
(OS/ASPR/EMMO); Larry G; Ryan  
Morhard; Steven Jt(tCHFStDPH );  
Adams, Jerome (HHS/OASH); Mansoura,  
Monique K.; Fantinato, Jessica  
(USDA.GOV); DC;  
danny.shiau@usuhs.edu; Cordts, Jerome  
(CTR); Schnitzer, Jay J; Ignacio, Joselito;  
Will Gaskins; CHRISTOPHER ALLEN;  
Kevin Montgomery; Logan, Linda L;  
LLogandakar

**Subject:** RE: Red Dawn Raging Start  
March 4

I put all my thoughts together for the defense of school closure. A little long, but I am sharing so that the opponents of school closure understand the arguments they will face if they do not act and it turns out they were terribly wrong.

One statistic that really stuck me as I looked thru the American Survey Data. There are 120 M households in the US. Only 1% of the households in the United States have children and a senior adult present (1.27 M households)

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**From:** Lawler, James V

**Sent:** Thursday, March 12, 2020 7:34 AM

**To:** Tom Bossert; Parker Jr, Gerald W

**Cc:** Richard Hatchett; Carter Mecher; Dr. Eva K Lee; Gruber,David (DSHS); Dr. Eva Lee; McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Duane Caneva; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON,

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CAMERON;  
Dodgen, Daniel (OS/ASPR/SPPR);  
DeBord, Kristin (OS/ASPR/SPPR);  
Phillips, Sally (OS/ASPR/SPPR);  
Matthew J CIV USARMY (USA); Lisa  
Koonin; HARVEY, MELISSA; WOLFE,  
HERBERT; Eastman, Alexander;  
EVANS, MARIEFRED;  
jwleduc@utmb.edu; Johnson, Robert  
(OS/ASPR/BARDA); Yeskey, Kevin;  
Disbrow, Gary (OS/ASPR/BARDA);  
Redd, John (OS/ASPR/SPPR); Hassell,  
David (Chris) (OS/ASPR/IO); Hamel,  
Joseph (OS/ASPR/IO); Hanfling, Dan;  
Wade, David; TARANTINO, DAVID A;  
KAUSHIK, SANGEETA; Lee, Scott  
(OS/ASPR/EMMO); Larry G; Ryan  
Morhard; Steven Jt(tCHFStDPH);  
Adams, Jerome (HHS/OASH); Mansoura,  
Monique K.; Fantinato, Jessica  
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danny.shiau@usuhs.edu; Cordts, Jerome  
(CTR); Schnitzer, Jay J; Ignacio, Joselito;  
Will Gaskins; CHRISTOPHER ALLEN;  
Kevin Montgomery; Logan, Linda L;  
LLogandakar

**Subject:** Re: Red Dawn Raging Start  
March 4

Like it Tom. The message is : let's be  
Singapore and Hong Kong, not Italy. And  
given the current state of our public health  
infrastructure we need to implement all  
NPI in affected communities

James Lawler, MD, MPH, FIDSA

Director, International Programs &  
Innovation

Global Center for Health Security, and

Associate Professor of Medicine

Division of Infectious Diseases

University of Nebraska Medical Center

m:

[james.lawler@unmc.edu](mailto:james.lawler@unmc.edu)

**From:** Tom Bossert

**Sent:** Thursday, March 12, 2020 2:08:34 PM

**To:** Parker Jr, Gerald W  
<[gparker@cvm.tamu.edu](mailto:gparkercvm@tamu.edu)>

**Cc:** Richard Hatchett  
<[richard.hatchett@cepi.net](mailto:richard.hatchett@cepi.net)>; Carter Mecher  
Dr. Eva K Lee

Gruber,David (DSHS)  
<[David.Gruber@dshs.texas.gov](mailto:David.Gruber@dshs.texas.gov)>; Dr. Eva Lee  
<[eva.evalee](mailto:eva.evalee)>

McDonald, Eric  
<[Eric.McDonald@sdcounty.ca.gov](mailto:Eric.McDonald@sdcounty.ca.gov)>; Borio, Luciana  
<[LBorio@iqt.org](mailto:LBorio@iqt.org)>; Brian Benson

Lawler, James V  
<[james.lawler@unmc.edu](mailto:james.lawler@unmc.edu)>; Tracey McNamara  
<[tmcNamara@westernu.edu](mailto:tmcNamara@westernu.edu)>; Duane Caneva

<[duane.caneva@hq.dhs.gov](mailto:duane.caneva@hq.dhs.gov)>; Baric, Ralph S  
<[rbaric@email.unc.edu](mailto:rbaric@email.unc.edu)>; Mecher, Carter (VA.GOV [va.gov])  
<[carter.mecher@va.gov](mailto:carter.mecher@va.gov)>; Hunt, Richard (OS/ASPR/EMMO)  
<[Richard.Hunt@hhs.gov](mailto:Richard.Hunt@hhs.gov)>; WILKINSON, THOMAS  
<[THOMAS.WILKINSON@hq.dhs.gov](mailto:THOMAS.WILKINSON@hq.dhs.gov)>; M.D.

<[MVCALLAHAN@mgh.harvard.edu](mailto:MVCALLAHAN@mgh.harvard.edu)>; David  
<[DMarcozzi@som.umaryland.edu](mailto:DMarcozzi@som.umaryland.edu)>; Charity A@CDPH  
<[Charity.Dean@cdph.ca.gov](mailto:Charity.Dean@cdph.ca.gov)>; Gregory J  
<[MartinGJ@state.gov](mailto:MartinGJ@state.gov)>; Walters, William (STATE.GOV [state.gov])  
<[walterswa2@state.gov](mailto:walterswa2@state.gov)>; HAMILTON, CAMERON  
<[cameron.hamilton@hq.dhs.gov](mailto:cameron.hamilton@hq.dhs.gov)>;

Dodgen, Daniel  
(OS/ASPR/SPPR)  
<[Daniel.Dodgen@hhs.gov](mailto:Daniel.Dodgen@hhs.gov)>; DeBord,Kristin (OS/ASPR/SPPR)  
<[KristinDeBord@hhs.gov](mailto:KristinDeBord@hhs.gov)>; Phillips, Sally (OS/ASPR/SPPR)  
<[Sally.Phillips@hhs.gov](mailto:Sally.Phillips@hhs.gov)>; Matthew J CIV USARMY (USA)  
<[matthew.j.hepburn.civ@mail.mil](mailto:matthew.j.hepburn.civ@mail.mil)>; Lisa Koonin  
<[lkoonin1](mailto:lkoonin1)>  
HARVEY, MELISSA  
<[melissa.harvey@hq.dhs.gov](mailto:melissa.harvey@hq.dhs.gov)>; WOLFE, HERBERT

<HERBERT.WOLFE@hq.dhs.gov>;  
Eastman, Alexander  
<alexander.eastman@hq.dhs.gov>;  
EVANS, MARIEFRED  
<mariefred.evans@associates.hq.dhs.gov>  
<jwleduc@utmb.edu  
<jwleduc@utmb.edu>; Johnson, Robert  
(OS/ASPR/BARDA)  
<Robert.Johnson@hhs.gov>; Yeskey,  
Kevin <kevinyeskey@hhs.gov>; Disbrow,  
Gary (OS/ASPR/BARDA)  
<Gary.Disbrow@hhs.gov>; Redd, John  
(OS/ASPR/SPPR)  
<John.Redd@hhs.gov>; Hassell, David  
(Chris) (OS/ASPR/IO)  
<David.Hassell@hhs.gov>; Hamel, Joseph  
(OS/ASPR/IO)  
<Joseph.Hamel@hhs.gov>; Hanfling, Dan  
<DHanfling@iqi.org>; Wade, David  
<david.wade@hq.dhs.gov>;  
TARANTINO, DAVID A  
<david.a.tarantino@cbpdhs.gov>;  
KAUSHIK, SANGEETA  
<sangeeta.kaushik@hq.dhs.gov>; Lee,  
Scott (OS/ASPR/EMMO)  
<Scott.Lee@hhs.gov>; Larry G  
<PadgetLG@state.gov>; Ryan Morhard  
<Ryan.Morhard@weforum.org>; Steven  
Jt(tCHFStDPH ) <steven.stack@ky.gov>;  
Adams, Jerome (HHS/OASH)  
<Jerome.Adams@hhs.gov>; Mansoura,  
Monique K. <mmansoura@mitre.org>;  
Fantinato, Jessica (USDA.GOV  
[usda.gov])  
<jessica.fantinato@usda.gov>; DC  
<michelle.colby@usda.gov>;  
danny.shiau@usuhs.edu  
<danny.shiau@usuhs.edu>; Cordts,  
Jerome (CTR)  
<jerome.cordts@associates.hq.dhs.gov>;  
Schnitzer, Jay J <jschnitzer@mitre.org>;  
Ignacio, Joselito  
<joselito.ignacio@fema.dhs.gov>; Will  
Gaskins <will.gaskins@efia.com>;  
CHRISTOPHER ALLEN

Kevin

Montgomery <kevin@collaborate.org>;  
Logan, Linda L <llogan@cvm.tamu.edu>;  
LLogandakar

**Subject:** Re: Red Dawn Raging Start  
March 4



We are making great progress. My message today on US TV will be as follows:

- The biggest misunderstanding about #coronavirus interventions is they are an à la carte menu of options to be selectively implemented. This is dead wrong. They ALL must be implemented to achieve a layered effect. Removing any one can defeat all. For instance, close schools AND cancel events.

- There's little value to European travel restrictions. Poor use of time & energy. Earlier, yes. Now, travel restrictions and screening are less useful. We have nearly as much disease here in the US as the countries in Europe. We MUST focus on layered community mitigation measures- Now!

-Tom

On Mar 12, 2020, at 12:44 AM,  
Parker Jr, Gerald W  
<[gparker@cvm.tamu.edu](mailto:gparker@cvm.tamu.edu)> wrote:

Richard, I will use it tomorrow.  
Thanks!

Get [Outlook for iOS](#)

**From:** Richard Hatchett  
<[richardhatchett@cepi.net](mailto:richardhatchett@cepi.net)>

**Sent:** Wednesday, March 11, 2020  
23:41

**To:** Parker Jr, Gerald W

**Cc:** Tom Bossert; Carter Mecher;  
Dr. Eva K Lee; Gruber, David  
(DSHS); Dr. Eva Lee; McDonald,

Eric; Borio, Luciana; Brian Benson;  
Lawler, James V; Tracey  
McNamara; Duane Caneva; Baric,  
Ralph S; Mecher, Carter ([VA.GOV](mailto:VA.GOV)  
[\[va.gov\]](mailto:va.gov)); Hunt, Richard  
(OS/ASPR/EMMO); WILKINSON,  
THOMAS; M.D.; David; Charity  
A@CDPH; Gregory J; Walters,  
William ([STATE.GOV](mailto:STATE.GOV) [\[state.gov\]](mailto:state.gov));  
HAMILTON, CAMERON;  
Dodgen,  
Daniel (OS/ASPR/SPPR);  
DeBord,Kristin (OS/ASPR/SPPR);  
Phillips, Sally (OS/ASPR/SPPR);  
Matthew J CIV USARMY (USA);  
Lisa Koonin; HARVEY,  
MELISSA; WOLFE, HERBERT;  
Eastman, Alexander; EVANS,  
MARIEFRED; [jwleduc@utmb.edu](mailto:jwleduc@utmb.edu);  
Johnson, Robert  
(OS/ASPR/BARDA); Yeskey,  
Kevin; Disbrow, Gary  
(OS/ASPR/BARDA); Redd, John  
(OS/ASPR/SPPR); Hassell, David  
(Chris) (OS/ASPR/IO); Hamel,  
Joseph (OS/ASPR/IO); Hanfling,  
Dan; Wade, David; TARANTINO,  
DAVID A; KAUSHIK,  
SANGEETA; Lee, Scott  
(OS/ASPR/EMMO); Larry G; Ryan  
Morhard; Steven Jt(tCHFStDPH );  
Adams, Jerome (HHS/OASH);  
Mansoura, Monique K.; Fantinato,  
Jessica ([USDA.GOV](mailto:USDA.GOV) [\[usda.gov\]](mailto:usda.gov));  
DC; [danny.shiau@usuhs.edu](mailto:danny.shiau@usuhs.edu);  
Cordts, Jerome (CTR); Schnitzer,  
Jay J; Ignacio, Joselito; Will  
Gaskins; CHRISTOPHER ALLEN;  
Kevin Montgomery; Logan, Linda  
L; LLogandakar

**Subject:** Re: Red Dawn Raging  
Start March 4

“our communities” and “eyewall” - I  
hate autocorrect

It is good - people need to have  
analogies they can relate to. They  
also need analogies that motivate  
action and help them understand  
that THEY must take action.  
Government won’t save you from a

Cat 5 storm, but through our actions we can prevent it from being that. The virus is coming to your community but what it does is up to us.

Sent from my iPhone

On 12 Mar 2020, at 04:34,  
Parker Jr, Gerald W  
<[gparker@cvm.tamu.edu](mailto:gparker@cvm.tamu.edu)>  
wrote:

Richard, thanks. I am trying to think of something that Texans can understand. You would not believe the vitriol locally in the Houston area now that the Houston Rodeo was cancelled. It was a courageous but correct decision. I have an interview with Houston Chronicle tomorrow and may use that analogy. I will also strongly support that local decision.

Get [Outlook for iOS](#)

**From:** Richard Hatchett  
<[richard.hatchett@cepi.net](mailto:richard.hatchett@cepi.net)>

**Sent:** Wednesday, March 11, 2020 11:27 PM

**To:** Parker Jr, Gerald W

**Cc:** Tom Bossert; Carter Mecher; Dr. Eva K Lee; Gruber, David (DSHS); Dr. Eva Lee; McDonald, Eric; Borio, Luciana; Brian Benson; Lawler, James V; Tracey McNamara; Duane Caneva; Baric, Ralph S; Mecher, Carter ([VA.GOV](http://VA.GOV))

[va.gov]); Hunt, Richard  
(OS/ASPR/EMMO);  
WILKINSON, THOMAS;  
M.D.; David; Charity  
A@CDPH; Gregory J;  
Walters, William  
(STATE.GOV [state.gov]);  
HAMILTON, CAMERON;

Dodgen, Daniel  
(OS/ASPR/SPPR);  
DeBord, Kristin  
(OS/ASPR/SPPR); Phillips,  
Sally (OS/ASPR/SPPR);  
Matthew J CIV USARMY  
(USA); Lisa Koonin;  
HARVEY, MELISSA;  
WOLFE, HERBERT;  
Eastman, Alexander;  
EVANS, MARIEFRED;  
[jwleduc@utmb.edu](mailto:jwleduc@utmb.edu); Johnson,  
Robert (OS/ASPR/BARDA);  
Yeskey, Kevin; Disbrow,  
Gary (OS/ASPR/BARDA);  
Redd, John  
(OS/ASPR/SPPR); Hassell,  
David (Chris) (OS/ASPR/IO);  
Hamel, Joseph  
(OS/ASPR/IO); Hanfling,  
Dan; Wade, David;  
TARANTINO, DAVID A;  
KAUSHIK, SANGEETA;  
Lee, Scott  
(OS/ASPR/EMMO); Larry  
G; Ryan Morhard; Steven  
Jt(tCHFStDPH ); Adams,  
Jerome (HHS/OASH);  
Mansoura, Monique K.;  
Fantinato, Jessica  
(USDA.GOV [usda.gov]);  
DC; [danny.shiau@usuhs.edu](mailto:danny.shiau@usuhs.edu);  
Cordts, Jerome (CTR);  
Schnitzer, Jay J; Ignacio,  
Joselito; Will Gaskins;  
CHRISTOPHER ALLEN;  
Kevin Montgomery; Logan,  
Linda L; LLogandakar

**Subject:** Re: Red Dawn  
Raging Start March 4

Gerry - I thought yesterday  
about the incoming hurricane  
analogy as well and think it is

a good one. This is a Cat 5 threat to safety that is coming too Jr. communities and fast, and we can either prepare and do the epidemic equivalent of evacuate to safer ground (i.e., TLC/CMG) or take our chances. It's a lot harder to evacuate when the winds are above 100 miles an hour on their way up to 190 at the eyeball.

Sent from my iPhone

On 12 Mar 2020, at 04:16, Parker Jr, Gerald W <[gjparker@cvm.tamu.edu](mailto:gjparker@cvm.tamu.edu)> wrote:

I do not see it. No use now. I saw it for China. But not now. We should focus on targeted, layered community mitigation measures. Maybe we could use a hurricane analogy that many understand. COVID19 is like a storm coming to our communities, but rather than evacuation or shelter in place orders, the analogous move is community mitigation. At this stage they must be aggressive because we do not have the time luxury of a hurricane in the Atlantic.

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**From:** Tom Bossert

---

>

**Sent:** Wednesday,  
March 11, 2020 23:05

**To:** Carter Mecher

**Cc:** Dr. Eva K Lee;  
Richard Hatchett;  
Gruber,David (DSHS);  
Dr. Eva Lee;  
McDonald, Eric; Borio,  
Luciana; Brian Benson;  
Lawler, James V;  
Tracey McNamara;  
Duane Caneva; Baric,  
Ralph S; Mecher,  
Carter ([VAGOV](mailto:Carter.VAGOV@va.gov)  
[\[va.gov\]](mailto:Carter.VAGOV@va.gov)); Hunt,  
Richard  
(OS/ASPR/EMMO);  
WILKINSON,  
THOMAS; M.D.;  
David; Charity  
A@CDPH; Gregory J;  
Walters, William  
([STATE.GOV](mailto:Walters.STATE.GOV@state.gov)  
[\[state.gov\]](mailto:Walters.STATE.GOV@state.gov));  
HAMILTON,  
CAMERON;

Dodgen, Daniel  
(OS/ASPR/SPPR);  
DeBord,Kristin  
(OS/ASPR/SPPR);  
Phillips, Sally  
(OS/ASPR/SPPR);  
Matthew J CIV  
USARMY (USA); Lisa  
Koonin; HARVEY,  
MELISSA; WOLFE,  
HERBERT; Eastman,  
Alexander; EVANS,  
MARIEFRED;  
[jwleduc@utmb.edu](mailto:jwleduc@utmb.edu);  
Johnson, Robert  
(OS/ASPR/BARDA);  
Yeskey, Kevin;  
Disbrow, Gary  
(OS/ASPR/BARDA);  
Redd, John  
(OS/ASPR/SPPR);  
Hassell, David (Chris)  
(OS/ASPR/IO); Hamel,  
Joseph (OS/ASPR/IO);  
Hanfling, Dan; Wade,

David; TARANTINO,  
DAVID A; KAUSHIK,  
SANGEETA; Lee,  
Scott  
(OS/ASPR/EMMO);  
Larry G; Ryan  
Morhard; Steven  
Jt(tCHFStDPH );  
Adams, Jerome  
(HHS/OASH);  
Mansoura, Monique  
K.; Fantinato, Jessica  
([USDA.GOV](https://www.usda.gov)  
[\[usda.gov\]](https://www.usda.gov)); DC;  
[danny.shiau@usuhs.edu](mailto:danny.shiau@usuhs.edu)  
; Cordts, Jerome  
(CTR); Schnitzer, Jay  
J; Ignacio, Joselito;  
Will Gaskins;  
CHRISTOPHER  
ALLEN; Kevin  
Montgomery; Parker  
Jr, Gerald W; Logan,  
Linda L; LLogandakar

**Subject:** Re: Red  
Dawn Raging Start  
March 4

Can anyone justify the  
European travel  
restriction,  
scientifically?  
Seriously, is there any  
benefit? I don't see it,  
but I'm hoping there is  
something I don't  
know.

-Tom

On Mar 11,  
2020, at 10:51  
PM, Carter  
Mecher  
<[cmecher@chart](mailto:cmecher@chart.com)  
[er.net](mailto:cmecher@chart.com)> wrote:

The US map  
starting to fill in.

[\[nytimes.com\]](https://www.nytimes.com)http  
[ps://www.nytime](https://www.nytimes.com)

Comparison of France, Spain, UK, Germany, US and Italy. Added in the population and dates of first case and first death.

The US is about 2 days behind France and Spain. France and Spain are about 8-9 days behind Italy. I would describe the growth in France, Spain and the US as explosive. Looks to me like we are going to experience an unmitigated Wuhan.

Two weeks from now, what will we wished we had done? I'm going to put that question in a little time capsule, and ask you two weeks from but rephrase it looking back.



| Date of 1st Death |  |
|-------------------|--|
|                   |  |
|                   |  |
| 2-Feb             |  |
| 3-Feb             |  |
| 4-Feb             |  |
| 5-Feb             |  |
| 6-Feb             |  |
| 7-Feb             |  |
| 8-Feb             |  |
| 9-Feb             |  |

|        |  |
|--------|--|
|        |  |
| 10-Feb |  |
| 11-Feb |  |
| 12-Feb |  |
| 13-Feb |  |
| 14-Feb |  |
| 15-Feb |  |
| 16-Feb |  |
| 17-Feb |  |
| 18-Feb |  |

|        |  |
|--------|--|
| 19-Feb |  |
|        |  |
| 20-Feb |  |
| 21-Feb |  |
| 22-Feb |  |
| 23-Feb |  |
| 24-Feb |  |
| 25-Feb |  |
| 26-Feb |  |
| 27-Feb |  |
| 28-Feb |  |
| 29-Feb |  |
| 1-Mar  |  |

|       |  |
|-------|--|
|       |  |
| 2-Mar |  |
| 3-Mar |  |
| 4-Mar |  |
| 5-Mar |  |
| 6-Mar |  |
| 7-Mar |  |
| 8-Mar |  |
| 9-Mar |  |

|        |  |
|--------|--|
|        |  |
| 10-Mar |  |
| 11-Mar |  |

Sent from Mail for Windows 10

---

**From:** Tom Bossert

**Sent:** Wednesday, March 11, 2020 10:05 PM

**To:** Dr. Eva K Lee

**Cc:** Richard Hatchett; Gruber, David (DSHS); Dr. Eva Lee; McDonald, Eric; Borio, Luciana; Brian Benson; Lawler, James V; Tracey McNamara; Duane Caneva; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON; Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Hanfling, Dan; Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH); Adams, Jerome (HHS/OASH); Mansoura, Monique K.; Fantinato, Jessica (USDA.GOV); DC; danny.shiau@usuh.edu; Cordts, Jerome (CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; CHRISTOPHER ALLEN; Kevin Montgomery; Parker Jr, Gerald W; Logan, Linda L; LLogandakar

**Subject:** Re: Red Dawn Raging Start March 4

Well, I give the president credit for changing his tone and making Americans know this is very serious. By all other metrics, it was a combination of gibberish, unnecessary steps, and insufficient detail. We still have a lot of work ahead of us team.

-Tom

On Mar  
11, 2020,

at 2:47  
PM, Dr.  
Eva K Lee  
<[evalee-  
gatech@p  
m.me](mailto:evalee-gatech@p<br/>m.me)>  
wrote:

Three  
notes:  
[[It's about  
winning  
time.]]

**1. Here's  
German  
Chancellor  
Angela  
Merkel's  
comments**

. My  
German  
advisor is  
the  
scientific  
advisor to  
Angela. He  
told me  
Angela  
loves  
mathemati  
cs and can  
understand  
all my  
math  
graphs  
very well.  
Here's her  
comment:

“The  
process  
has to be  
focused on  
not  
overburde  
ning the  
health  
system by  
slowing  
the virus’s  
spread ...  
It’s about  
winning  
time,”

[nypost.co  
m]https://n  
ypost.com/  
2020/03/1  
1/angela-  
merkel-  
warns-that-  
70-of-  
germans-  
could-get-  
coronaviru  
s/  
[nypostco  
m]

She's  
already  
been  
criticized  
for not  
acting /  
speaking in  
public. But  
Germany  
was able to  
hold out  
very well  
until Italy's  
fire  
spreads to  
every  
country in  
Europe.

**2. DC**  
**colleagues**  
**: Please**  
**tele-work,**  
please  
protect  
yourself  
and thus  
protect the  
governmen  
t business  
continuity.  
Remember  
one case is  
one too  
many --  
because

there're all  
the other  
hidden  
cases you  
won't see.  
David M's  
asked to  
analyze  
Baltimore  
with not-  
yet-a-  
recorded-  
case  
scenario,  
That is a  
good  
model  
system to  
view. It  
can be  
applied to  
all cities.  
You can  
see the  
benefits of  
tele-work  
even if  
only 50%  
participate.  
King's  
county did  
not start  
with one  
case on  
Feb 23 in  
the nursing  
home, it  
had at least  
5 a week  
earlier(fro  
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n analysis).  
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homes  
were under  
attack.  
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there's a  
meeting  
with  
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caretakers  
and these  
individuals



got  
infected at  
that  
meeting  
and carried  
with them  
to their  
respective  
nursing  
homes.

I have tons  
of graphs  
and some  
specific to  
DC. I will  
add them  
onto the  
NPI  
analysis  
file and  
send them.

3. I was on  
local  
public  
health  
COVID-  
19 call this  
morning.  
One  
jurisdiction  
accuses  
another  
jurisdiction  
of  
overreactin  
g -- that's  
Fulton  
county  
school  
closing  
due to a  
positive  
case of a  
teacher (as  
Carter  
reported).  
Other  
jurisdiction  
s did not  
like that  
and felt

Fulton  
overracted  
. Yes,  
school  
closure  
remains  
very  
critical, so  
is tele-  
work,  
online  
large-scale  
gathering  
instead of  
in person  
etc.. and  
yes, please  
rapid  
screening.  
And I will  
send  
around  
some  
hospital  
resources  
optimizatio  
n soon.

evalee-  
gatech@p  
m.me

[newton.is  
ye.gatech.e  
du]https://  
newtonisye  
.gatech.ed  
u/DrLee/  
[newton.is  
ye.gatech.e  
du]

mobile:  
404-432-  
6835

Sent with  
ProtonMai  
! Secure  
Email.

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On  
Wednesda  
y, March  
11, 2020  
12:15 PM,  
<[cmecher  
@charter.n  
et](mailto:cmecher@charter.net)> wrote:

I  
notic  
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lot  
of  
HHS  
emai  
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addr  
esse  
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this  
emai  
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grou

p  
and  
you  
all  
have  
been  
quiet  
for  
most  
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**From:** [Carter Mecher](#)

**Sent:** Tuesday, March 10, 2020 10:30 AM

**To:** [Gruber, David \(DSHS\)](#); [Dr. Eva Lee](#); [McDonald, Eric](#)

**Cc:** [Borio, Luciana](#); [Brian Benson](#); [Lawler, James V](#); [Tracey McNamara](#); [Duane Caneva](#); [Dr. Eva K Lee](#); [Tom Bossert](#); [Baric, Ralph S](#); [Mecher, Carter \(VA.GOV\)](#); [Hunt, Richard \(OS/ASPR/EMMO\)](#); [Richard Hatchett](#); [WILKINSON, THOMAS, M.D.](#); [David](#); [Charity A@CDPH](#); [Gregory J](#); [Walters, William \(STATE.GOV\)](#); [HAMILTON, CAMERON](#); [Dodgen, Daniel \(OS/ASPR/SPPR\)](#); [DeBord, Kristin \(OS/ASPR/SPPR\)](#); [Phillips, Sally \(OS/ASPR/SPPR\)](#); [Matthew J CIV USARMY \(USA\)](#); [Lisa Koonin](#); [HARVEY, MELISSA](#); [WOLFE, HERBERT](#); [Eastman, Alexander](#); [EVANS, MARIEFRED](#); [jwleduc@utmb.edu](#); [Johnson, Robert \(OS/ASPR/BARDA\)](#); [Yeskey, Kevin](#); [Disbrow, Gary \(OS/ASPR/BARDA\)](#); [Redd, John \(OS/ASPR/SPPR\)](#); [Hassell, David \(Chris\) \(OS/ASPR/IO\)](#); [Hamel, Joseph \(OS/ASPR/IO\)](#); [Hanfling, Dan](#); [Wade, David](#); [TARANTINO, DAVID A](#); [KAUSHIK, SANGEETA](#); [Lee, Scott \(OS/ASPR/EMMO\)](#); [Larry G](#); [Ryan Morhard](#); [Steven Jt\(tCHFStDPH \)](#); [Adams, Jerome \(HHS/OASH\)](#); [Mansoura, Monique K.](#); [Fantinato, Jessica \(USDA.GOV\)](#); [DC](#); [danny.shiau@usuhs.edu](#); [Cordts, Jerome \(CTR\)](#); [Schnitzer, Jay J](#); [Ignacio, Joselito](#); [Will Gaskins](#); [CHRISTOPHER ALLEN](#); [Kevin Montgomery](#); [Parker Jr, Gerald W](#); [Logan, Linda L](#); [LLogandakar](#)

**Subject:** RE: Red Dawn Raging Start March 4

Back in 2007, there was modeling for estimating the economic impact of a pandemic (unmitigated with no NPIs) and a mitigated pandemic plus the costs of NPIs. I can see if I can dig that up. The bottom line is that when you add in the cost associated with lives lost in an unmitigated pandemic, additional healthcare costs due to greater numbers of those who are ill and hospitalized, economic costs due to lost productivity due to increased illness, the NPI costs pale in comparison I will see what additional info I can find to help you.

I'm listening to the arguments for not closing schools: (1) kids may not be important in disease transmission and when kids do become infected, their illness is mild; (2) closing schools is too disruptive, it will require parents to stay home from work to mind their children (and this absenteeism could adversely impact critical sectors such as healthcare); (3) large number of kids depend upon school meals and the closure of schools could have serious consequences; (4) by keeping kids home, they have more time to be around older adults in the household and potentially transmit disease to more vulnerable groups (the thinking is that it would be safer to keep them at school for at least 8 hrs of the day to decrease contact time with older adults in the household); and (5) kids will just mix again the community (that kids will "hang out at malls").

Just something to think about.

Schools are closing now for 1 week for spring break (many this week and some in the next week or two). This is happening at a critical point of the acceleration of this outbreak in the US. In the next couple of weeks our healthcare system is likely to be stressed. A good number of parents take time off over spring break to be with their kids (many times both parents for two parent households). Below is a graph of annual leave usage rates in VA It is very consistent from year to year (looks a lot like an EKG tracing. You see a spike at Thanksgiving, another huge spike round Christmas/New Years, another small bump in the spring (spring break), and another broad bump (that looks like a T wave on an EKG) in the summer months when families tend to take vacations (because kids are out of school).

Given the argument of those opposed to closing schools, should we cancel spring break and keep the schools open so that parents don't have to stay home to mind their kids at this particularly vulnerable time when our healthcare system is about to be hammered? Should we also keep the schools open so that kids are kept away from older adults in the household for much of the day during this period of acceleration? That is pretty much the extension of illogical logic.

We close schools for 1 week for spring break and the world does not fall apart. The nutrition of children does not suffer. Do we think if schools closed for two weeks, that the world would come crashing down? Why not close for two weeks and then reassess (at least it gives us time). We can never get that time back.

Last thing. Many of you have kids, do any of them hang out at malls? In my neighborhood I don't even see kids outside—they are all inside texting, on Instagram, playing games with their friends online or whatever they do these days. Hardly see them riding their bikes around. I understand that “going to the mall” is code for kids re-congregating outside of school. Even if they do they are in a less socially dense environment and in much smaller groups. The whole school doesn't all go together anywhere, except to school.

Sent from [Mail](#) for Windows 10

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**From:** [Gruber, David \(DSHS\)](#)

**Sent:** Tuesday, March 10, 2020 9:58 AM

**To:** [Dr. Eva Lee](#); [McDonald, Eric](#)

**Cc:** [Carter Mecher](#); [Borio, Luciana](#); [Brian Benson](#); [Lawler, James V](#); [Tracey McNamara](#); [Duane Caneva](#); [Dr. Eva K Lee](#); [Tom Bossert](#); [Baric, Ralph S](#); [Mecher, Carter \(VA.GOV\)](#); [Hunt, Richard \(OS/ASPR/EMMO\)](#); [Richard Hatchett](#); [WILKINSON, THOMAS; M.D.](#); [David](#); [Charity A@CDPH](#); [Gregory J](#); [Walters, William \(STATE.GOV\)](#); [HAMILTON, CAMERON](#); [Dodgen, Daniel \(OS/ASPR/SPPR\)](#); [DeBord, Kristin \(OS/ASPR/SPPR\)](#); [Phillips, Sally \(OS/ASPR/SPPR\)](#); [Matthew J CIV USARMY \(USA\)](#); [Lisa Koonin](#); [HARVEY, MELISSA](#); [WOLFE, HERBERT](#); [Eastman, Alexander](#); [EVANS, MARIEFRED](#); [jwleduc@utmb.edu](#); [Johnson, Robert \(OS/ASPR/BARDA\)](#); [Yeskey, Kevin](#); [Disbrow, Gary \(OS/ASPR/BARDA\)](#); [Redd, John \(OS/ASPR/SPPR\)](#); [Hassell, David \(Chris\) \(OS/ASPR/IO\)](#); [Hamel, Joseph \(OS/ASPR/IO\)](#); [Hanfling, Dan](#); [Wade, David](#); [TARANTINO, DAVID A](#); [KAUSHIK, SANGEETA](#); [Lee, Scott \(OS/ASPR/EMMO\)](#); [Larry G](#); [Ryan Morhard](#); [Steven Jt\(tCHFStDPH\)](#); [Adams, Jerome \(HHS/OASH\)](#); [Mansoura, Monique K.](#); [Fantinato, Jessica \(USDA.GOV\)](#); [DC](#); [danny.shiau@usuhs.edu](#); [Cordts, Jerome \(CTR\)](#); [Schnitzer, Jay J](#); [Ignacio, Joselito](#); [Will Gaskins](#); [CHRISTOPHER ALLEN](#); [Kevin Montgomery](#); [Parker Jr, Gerald W](#); [Logan, Linda L](#); [LLogandakar](#)

**Subject:** RE: Red Dawn Raging Start March 4

As a state public health official who is in agreement that NPIs must be strongly enacted early; I'm looking for help from this group to find tools that make the case for NPIs. The target audience is those outside of health.

I'm attaching an example slide (admittedly and intentionally rudimentary) that might be used to support this argument and explain the totality of NPIs. Do others see this as something that might aid in influencing and, if so, are there data sources that I might tap into showing the

impacts of NPIs directly on epi curves and how these NPIs would impact other community foundations?

Thanks  
Dave

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**From:** Dr. Eva Lee <[eva.evalee.lee64@gmail.com](mailto:eva.evalee.lee64@gmail.com)>

**Sent:** Saturday, March 7, 2020 8:53 PM

**To:** McDonald, Eric <[Eric.McDonald@sdcounty.ca.gov](mailto:Eric.McDonald@sdcounty.ca.gov)>

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Kevin Montgomery <[kevin@collaborate.org](mailto:kevin@collaborate.org)>; Parker Jr, Gerald W <[gparker@cvm.tamu.edu](mailto:gparker@cvm.tamu.edu)>; Logan, Linda L <[llogan@cvm.tamu.edu](mailto:llogan@cvm.tamu.edu)>; LLogandakar

**Subject:** Re: Red Dawn Raging Start March 4

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| <p><b>WARNING:</b> This email is from outside the HHS system Do not click on links or attachments unless you expect them from the sender and know the content is safe.</p> |
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I assume the WHO test kit protocol used by other parts of the world won't be used by US (or accepted by FDA/CDC). Yes, we have talked about testing bottleneck since January. Can't say more.

This may be of interest from BBC.

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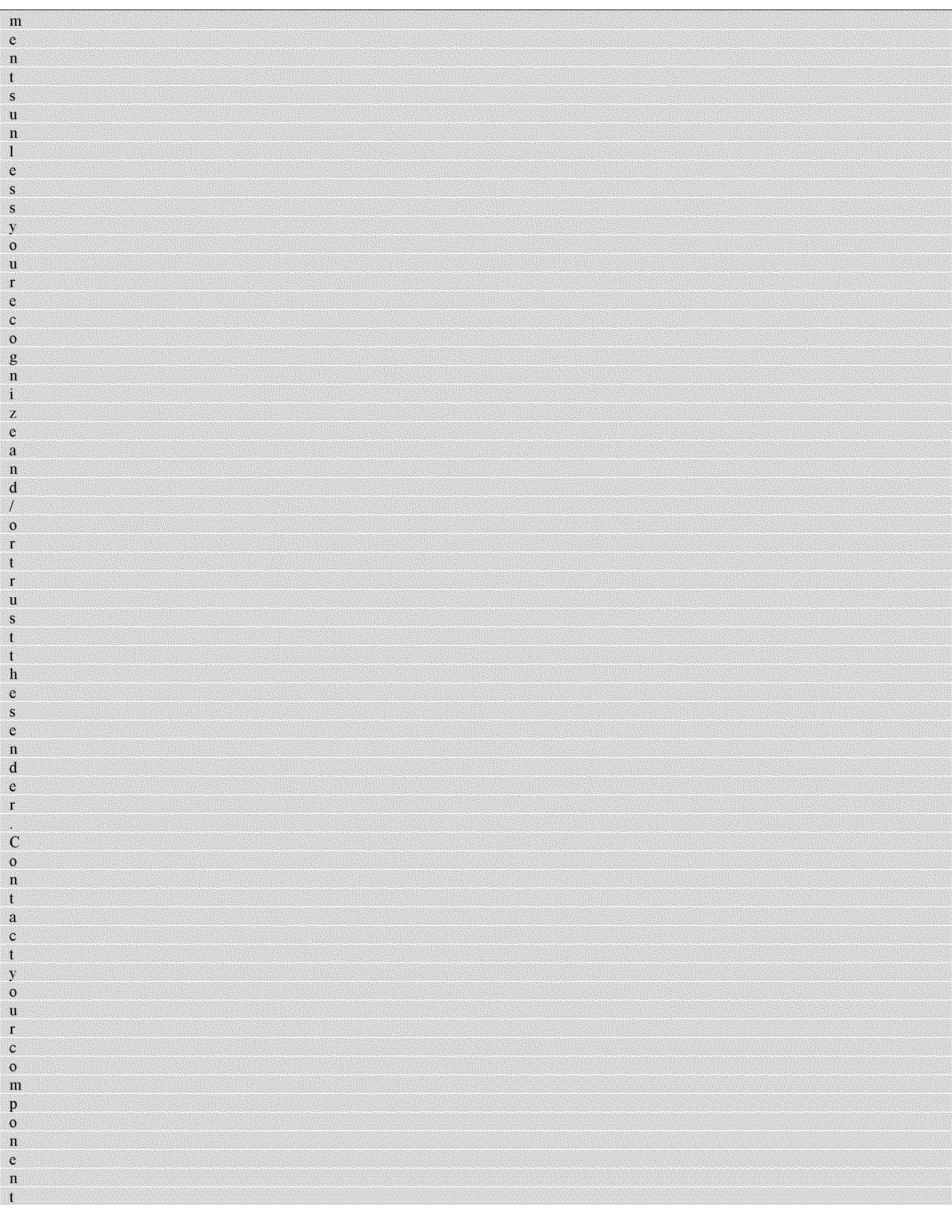
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usually primary carcinoma of the colon (see 482). Patients with intestinal (actual) usually have patent intestinal fistulas.) In the US (theoretically)

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rssee about 120M patient visits.  
So hold onto that number for a moment,  
Let's assume this

output break has a net attack rate of 30%

(so about 100M infected) and that 50% of those infected

are asymptomatic (50M).  
Let's assume the other 50% (those 50M who are symptomatic) are t

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There will be the initial presentation, then most of these patients (35%-38% of those who

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rovide random chronological and occasionally ill and deliriously patient sentiments will likely require daily checks. Thi

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staying in home if you are ill, staying in home if someone is ill, closing schools, and avoiding

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these rules and adapt them to whatever local conditions might exist (in their homes and at work

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different in each community. Modelers have done one just this (Bob Glass in particular). They h

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points in the outbreak; the outbreak comes as messages are non-linear and not predictable.

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ing Start March 4

CAUTION: This seminar is for original sin attendees from outside of DHS.

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terday,  
Wuhan has reported  
49,671 cases and  
230 deaths.

The cases are  
plateauing but

deathswill continue to meet or rise over the next month (deathslag cases by about 3 weeks). Therea

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ould be underreported and China was hiding things half the numbers, the attack rate would still

only been 14% (amitted generated without break).  
I had are all hard to remember conciliating that until I read that

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session numbers (8 more cases supplied us correct identification of number of cases due to duplication)

March 5, 202

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passengers and occupants of cruise ships were recommended to be infected, excluding those



who became infected after returning home.

On January 1, the cruise ship DDiamond Princess

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of this month. However, according to the Ministry of Health, Labor and Welfare, she left a

fter a period of health observation. As a result of carrying out a virus test for them, eight

the newspaper's  
senior  
writers  
were  
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A total of 696  
people  
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cted on the cruise ship, excluding those who became infected after returning home.  
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<A81F4842CAAA4B60AB38AA1790253913.png>

<2C4EE4AF32384D10986ED17D25126D99.png>

**To:** Eva  
**Cc:** Mecher, Carter[Carter.Mecher@va.gov]; Tom Richard Hatchett[richard.hatchett@cepi.net];  
 Carter Lawler, James V[james.lawler@unmc.edu]; Parker Jr, Gerald W[gparker@cvm.tamu.edu];  
 Caneva, Duane[duane.caneva@hq.dhs.gov]; Hanfling, Dan[DHanfling@iq.t.org];  
 Gruber, David (DSHS)[David.Gruber@dshs.texas.gov]; CHRISTOPHER  
 McDonald, Eric[Eric.McDonald@sdcounty.ca.gov]; Borio,  
 Luciana[LBorio@iq.t.org]; Brian Tracey McNamara[tmcNamara@westernu.edu]; Baric, Ralph  
 S[rbaric@email.unc.edu]; Hunt, Richard (OS/ASPR/EMMO)[Richard.Hunt@hhs.gov]; WILKINSON,  
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 Charity A@CDPH[Charity.Dean@cdph.ca.gov]; Gregory J[MartinGJ@state.gov]; Walters, William  
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 Dodgen, Daniel t(OS/ASPR/SPPR)[daniel.dodgen@hhs.gov]; DeBord, Kristin (OS/ASPR/SPPR)[Kristin.DeBord@hhs.gov]; Phillips,  
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 (OS/ASPR/IO)[David.Hassell@hhs.gov]; Hamel, Joseph (OS/ASPR/IO)[Joseph.Hamel@hhs.gov]; Wade,  
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 SANGEETA[sangeeta.kaushik@hq.dhs.gov]; Lee, Scott (OS/ASPR/EMMO)[Scott.Lee@hhs.gov]; Larry G[PadgetLG@state.gov];  
 Ryan Morhard[Ryan.Morhard@weforum.org]; Steven Jt(tCHFStDPH)[steven.stack@ky.gov]; Adams, Jerome  
 (HHS/OASH)[Jerome.Adams@hhs.gov]; Mansoura, Monique K.[mmansoura@mitre.org]; Fantinato, Jessica  
 (USDA.GOV)[jessica.fantinato@usda.gov]; DC[michelle.colby@usda.gov]; danny.shiau@usuhs.edu[danny.shiau@usuhs.edu]; Cordts,  
 Jerome (CTR)[jerome.cordts@associates.hq.dhs.gov]; Schnitzer, Jay J.[jschnitzer@mitre.org]; Ignacio,  
 Joselito[joselito.ignacio@fema.dhs.gov]; Will Gaskins[will.gaskins@efiia.com]; Kevin Montgomery[kevin@collaborate.org]; Logan,  
 Linda L[llogan@cvm.tamu.edu]; Venkayya, Rajeev[rajeev.venkayya@takeda.com]  
**From:** Dr. Eva K  
**Sent:** Mon 3/16/2020 10:58:24 AM (UTC-04:00)  
**Subject:** Re: [EXTERNAL] Re: Red Dawn Raging Start March 4  
 2020 0301 CommunityScreening+Covid-19Testing.pdf

Two items: global effects, and community screening and covid-19 tests.

**Global effects:** You can see the circular global effects where every country is being affected, and infected persons from Europe and US are looping back to Asian and other countries. I wonder why policy makers cannot make decisions in such an urgency, since it is crystal clear US is in the heart of the fight and we have no choice but to work crazily hard to win this fight. I trust state and local policy makers are making all the right and timely decisions.

### Community screening and covid-19 testing

Attached is the drive-through and walk-through design. RealOpt-POD optimizes the allocation of resources across each of these stations based on the local throughput requirement, and maximizes the systems performance. Local public health emergency responders know how to operate such a construct since this is what they have planned for and trained for pandemic and for anthrax incidence last-mile dispensing. For COVID-19, this is our first-strike to screen and to test. I am happy to assist your local jurisdictions if needed. The system is free for them to use.

<https://newton.isye.gatech.edu/DrLee/>  
 mobile:

Sent with [ProtonMail](#) Secure Email.

----- Original Message -----

On Monday, March 16, 2020 9:03 AM, Eva Lee

wrote:

Thanks Carter. This is useful. Some local public health coordinators asked me what the CDC recommendations mean. Your interpretation is good.

Sent from my iPhone

On Mar 16, 2020, at 5:42 AM, Mecher, Carter <Carter.Mecher@va.gov> wrote:

It doesn't matter. Anyone with common sense (governors) as well as the public will interpret this to practically mean school closure. That CDC would not want 50 people being together for even an hour while hundreds or thousands of kids could be together for 8 hours defies common sense. Imagine CDC getting on TV and trying to explain. Good luck with that.

Sent with BlackBerry Work  
(www.blackberry.com)

---

**From:** Tom Bossert  
**Date:** Monday, Mar 16, 2020, 12:32 AM  
**To:** Richard Hatchett <[richard.hatchett@cepi.net](mailto:richard.hatchett@cepi.net)>  
**Cc:** Carter Mecher <[cmecher@charter.net](mailto:cmecher@charter.net)>, Dr. Eva K Lee <[james.lawler@unmc.edu](mailto:james.lawler@unmc.edu)>, Parker Jr, Gerald W <[gparker@cvm.tamu.edu](mailto:gparker@cvm.tamu.edu)>, Lawler, James V <[rjglassjr@gmail.com](mailto:rjglassjr@gmail.com)>, Caneva, Duane <[duane.caneva@hq.dhs.gov](mailto:duane.caneva@hq.dhs.gov)>, Hanfling, Dan <[DHanfling@iq.t.org](mailto:DHanfling@iq.t.org)>, Gruber, David (DSHS) <[David.Gruber@dshs.texas.gov](mailto:David.Gruber@dshs.texas.gov)>, Dr. Eva Lee <[eva.evalee.lee64@gmail.com](mailto:eva.evalee.lee64@gmail.com)>, CHRISTOPHER ALLEN <[jamison.day@gmail.com](mailto:jamison.day@gmail.com)>, McDonald, Eric <[Eric.McDonald@sdcounty.ca.gov](mailto:Eric.McDonald@sdcounty.ca.gov)>, Borio, Luciana <[LBorio@iq.t.org](mailto:LBorio@iq.t.org)>, Brian Benson <[rbaric@email.unc.edu](mailto:rbaric@email.unc.edu)>, Tracey McNamara <[tmcNamara@westernu.edu](mailto:tmcNamara@westernu.edu)>, Baric, Ralph S <[Richard.Hunt@hhs.gov](mailto:Richard.Hunt@hhs.gov)>, Mecher, Carter <[Carter.Mecher@va.gov](mailto:Carter.Mecher@va.gov)>, Hunt, Richard (OS/ASPR/EMMO) <[MVCALLAHAN@mg.harvard.edu](mailto:MVCALLAHAN@mg.harvard.edu)>, WILKINSON, THOMAS <[THOMAS.WILKINSON@hq.dhs.gov](mailto:THOMAS.WILKINSON@hq.dhs.gov)>, M.D. <[DMarcozzi@som.umaryland.edu](mailto:DMarcozzi@som.umaryland.edu)>, David <[DMarcozzi@som.umaryland.edu](mailto:DMarcozzi@som.umaryland.edu)>, Charity A@CDPH <[Charity.Dean@cdph.ca.gov](mailto:Charity.Dean@cdph.ca.gov)>, Gregory J <[MartinGJ@state.gov](mailto:MartinGJ@state.gov)>, Walters, William (STATE.GOV) <[walterswa2@state.gov](mailto:walterswa2@state.gov)>, HAMILTON, CAMERON <[cameron.hamilton@hq.dhs.gov](mailto:cameron.hamilton@hq.dhs.gov)>, Dodgen, Daniel (OS/ASPR/SPPR) <[daniel.dodgen@hhs.gov](mailto:daniel.dodgen@hhs.gov)>, DeBord, Kristin (OS/ASPR/SPPR) <[Kristin.DeBord@hhs.gov](mailto:Kristin.DeBord@hhs.gov)>, Phillips, Sally (OS/ASPR/SPPR) <[Sally.Phillips@hhs.gov](mailto:Sally.Phillips@hhs.gov)>, Matthew J CIV USARMY (USA) <[matthew.j.hepburn.civ@mail.mil](mailto:matthew.j.hepburn.civ@mail.mil)>, Lisa Koonin <[lkoonin1@hhs.gov](mailto:lkoonin1@hhs.gov)>, HARVEY, MELISSA <[melissa.harvey@hq.dhs.gov](mailto:melissa.harvey@hq.dhs.gov)>, WOLFE, HERBERT <[HERBERT.WOLFE@hq.dhs.gov](mailto:HERBERT.WOLFE@hq.dhs.gov)>, Eastman, Alexander <[alexander.eastman@hq.dhs.gov](mailto:alexander.eastman@hq.dhs.gov)>, EVANS, MARIEFRED <[mariefred.evans@associates.hq.dhs.gov](mailto:mariefred.evans@associates.hq.dhs.gov)>, jwleduc@utmb.edu <[jwleduc@utmb.edu](mailto:jwleduc@utmb.edu)>, Johnson, Robert (OS/ASPR/BARDA) <[Robert.Johnson@hhs.gov](mailto:Robert.Johnson@hhs.gov)>, Yeskey, Kevin <[kevin.yeskey@hhs.gov](mailto:kevin.yeskey@hhs.gov)>, Disbrow, Gary (OS/ASPR/BARDA) <[Gary.Disbrow@hhs.gov](mailto:Gary.Disbrow@hhs.gov)>, Redd, John (OS/ASPR/SPPR) <[John.Redd@hhs.gov](mailto:John.Redd@hhs.gov)>, Hassell, David (Chris) (OS/ASPR/IO) <[David.Hassell@hhs.gov](mailto:David.Hassell@hhs.gov)>, Hamel, Joseph (OS/ASPR/IO) <[Joseph.Hamel@hhs.gov](mailto:Joseph.Hamel@hhs.gov)>, Wade, David <[david.wade@hq.dhs.gov](mailto:david.wade@hq.dhs.gov)>, TARANTINO, DAVID A <[david.a.tarantino@cbp.dhs.gov](mailto:david.a.tarantino@cbp.dhs.gov)>, KAUSHIK, SANGEETA <[sangeeta.kaushik@hq.dhs.gov](mailto:sangeeta.kaushik@hq.dhs.gov)>, Lee, Scott (OS/ASPR/EMMO) <[Scott.Lee@hhs.gov](mailto:Scott.Lee@hhs.gov)>, Larry G <[PadgetLG@state.gov](mailto:PadgetLG@state.gov)>, Ryan Morhard <[Ryan.Morhard@weforum.org](mailto:Ryan.Morhard@weforum.org)>, Steven Jt(tCHFS tDPH) <[steven.stack@ky.gov](mailto:steven.stack@ky.gov)>, Adams, Jerome (HHS/OASH) <[Jerome.Adams@hhs.gov](mailto:Jerome.Adams@hhs.gov)>, Mansoura, Monique K. <[mmansoura@mitre.org](mailto:mmansoura@mitre.org)>, Fantinato, Jessica (USDA.GOV) <[jessica.fantinato@usda.gov](mailto:jessica.fantinato@usda.gov)>, DC <[michelle.colby@usda.gov](mailto:michelle.colby@usda.gov)>, danny.shiau@usuhs.edu <[danny.shiau@usuhs.edu](mailto:danny.shiau@usuhs.edu)>, Cordts, Jerome (CTR) <[jerome.cordts@associates.hq.dhs.gov](mailto:jerome.cordts@associates.hq.dhs.gov)>, Schnitzer, Jay J. <[jschnitzer@mitre.org](mailto:jschnitzer@mitre.org)>, Ignacio, Joselito <[joselito.ignacio@fema.dhs.gov](mailto:joselito.ignacio@fema.dhs.gov)>, Will Gaskins <[will.gaskins@efia.com](mailto:will.gaskins@efia.com)>, Kevin Montgomery <[kevin@collaborate.org](mailto:kevin@collaborate.org)>, Logan, Linda L <[llogan@cvm.tamu.edu](mailto:llogan@cvm.tamu.edu)>, LLogandakar <[llogandakar@gmail.com](mailto:llogandakar@gmail.com)>, Venkayya, Rajeew <[rajeew.venkayya@takeda.com](mailto:rajeew.venkayya@takeda.com)>  
**Subject:** [EXTERNAL] Re: Red Dawn Raging Start March 4

No, it expressly excludes them, frustratingly:

CDC guidance as of 3/15/2020

Large events and mass gatherings can contribute to the spread of COVID-19 in the United States via travelers who attend these events and introduce the virus to new communities. Examples of large events and mass gatherings include conferences, festivals, parades, concerts, sporting events, weddings, and other types of assemblies. These events can be planned not only by organizations and communities but also by individuals.

Therefore, CDC, in accordance with its guidance for large events and mass gatherings, recommends that for the next 8 weeks, organizers (whether groups or individuals) cancel or postpone in-person events that consist of 50 people or more throughout the United States.

Events of any size should only be continued if they can be carried out with adherence to guidelines for protecting vulnerable populations, hand hygiene, and social distancing. When feasible, organizers could modify events to be virtual.

This recommendation does not apply to the day to day operation of organizations such as schools, institutes of higher learning, or businesses. This recommendation is made in an attempt to reduce introduction of the virus into new communities and to slow the spread of infection in communities already affected by the virus. This recommendation is not intended to supersede the advice of local public health officials.

-Tom

On Mar 16, 2020, at 12:01 AM, Richard Hatchett <richard.hatchett@cepi.net> wrote:

Does that include schools?

Sent from my iPhone

On 16 Mar 2020, at 00:32, Carter Mecher wrote:

CDC now recommends that, for the next 8 weeks, events with more than 50 people are canceled throughout the U.S.

<A81F4842CAAA4B60AB38AA1790253913.png>

Sent from Mail for Windows 10

**From:** Dr. Eva K Lee

**Sent:** Sunday, March 15, 2020 4:46 PM

**To:** Tom Bossert

**Cc:** Lawler, James V; Parker Jr, Gerald W; Caneva, Duane; Hanfling, Dan; Gruber, David (DSHS); Dr. Eva Lee; CHRISTOPHER ALLEN; Richard Hatchett; McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Baric, Ralph S; Mecher,

Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON; Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH); Adams, Jerome (HHS/OASH); Mansoura, Monique K.; Fantinato, Jessica (USDA.GOV); DC; danny.shiau@usuhs.edu; Cordts, Jerome (CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; Kevin Montgomery; Logan, Linda L; LLogandakar; rajeev.venkayya@takeda.com

**Subject:** Re: Red Dawn Raging Start March 4

Thank you. The total infection and death outside China now surpass those of China's infection and deaths.

<https://newton.isye.gatech.edu/DrLee/>

mobile:

Sent with [ProtonMail](#) Secure Email.

----- Original Message -----

On Sunday, March 15, 2020 4:23 PM, Tom Bossert wrote:

I just posted another piece. Nothing new in it to this team, but it reflects my view of the situation.

<https://abcnews.go.com/Health/coronavirus-paradox-lowest-point-finest-hour-opinion/story?id=69602027>

-Tom

On Mar 14, 2020, at 3:55 PM,  
wrote:

---

**Vincent Covello shared Q&As he developed with  
ASTHO on COVID/**

<https://www.astho.org/COVID-19/Q-and-A/>

**He uses a technique called message maps. He has a  
rule 3/9/27--convey 3 points, in 9 seconds, and 27  
words. Perfect size for the media.**

**Might be useful for those of you from state and  
local public health as well as from healthcare  
systems.**

**From: Vincent Covello**  
[<vincentcovello@yahoo.com>](mailto:vincentcovello@yahoo.com)

**Date:** Saturday, Mar 14, 2020, 10:14 AM

**To:** Mecher, Carter <[Carter.Mecher@va.gov](mailto:Carter.Mecher@va.gov)>

**Subject:** [EXTERNAL] Follow up: COVID-19 document

Hi Carter,

I have provided below the url for a COVID-19 document that I co-authored and that was published today by ASTHO on their website.

The document contains message maps for questions addressed to US State and Territorial Health Directors. This first batch of 45+ questions came directly last week from the Health Directors.

I co-authored a similar document on ZIKA for ASTHO a few years ago. My understanding is ASTHO received a surge of download requests for the ZIKA document on the first day of publication. Many of the requests came from reporters. They liked the short and long answer format of the message map.

As you might imagine, the contents of the document will be a moving target. The questions and the mapped answers will be updated frequently. For example, we have at least ten new questions based on the events of just the last few days.

Please feel free to share this document with others. I and my team members would also greatly welcome your comments or suggestions.

Best regards,

Vincent

Dr. Vincent Covello

Director

Center for Risk Communication

Tel.:

Email:

<https://www.astho.org/COVID-19/Q-and-A/>

-----



From: "Dr. Eva K Lee"

To: James V"

Cc: "Carter Mecher", Gerald W",  
Duane", "Tom  
Bossert", Dan", David (DSHS)", "Dr. Eva Lee",  
"CHRISTOPHER ALLEN",  
"Richard Hatchett",  
Eric", Luciana", "Brian Benson", "Tracey  
McNamara", Ralph S", Carter (VA.GOV)",  
Richard (OS/ASPR/EMMO)", THOMAS",  
"M.D.", "David", "Charity A@CDPH",  
"Gregory J", William (STATE.GOV)",  
CAMERON", tDanielt(OS/ASPR/SPPR)", Kristi  
n (OS/ASPR/SPPR)", Sally  
(OS/ASPR/SPPR)", "Matthew J CIV  
USARMY (USA)", "Lisa Koonin",  
MELISSA", HERBERT", Alexander",  
MARIEFRED", "jwleduc@utmb.edu", Robert  
(OS/ASPR/BARDA)", Kevin", Gary  
(OS/ASPR/BARDA)", John  
(OS/ASPR/SPPR)", David (Chris)  
(OS/ASPR/IO)", Joseph (OS/ASPR/IO)",  
David", DAVID A", SANGEETA", Scott  
(OS/ASPR/EMMO)", "Larry G", "Ryan  
Morhard", "Steven Jt(tCHFStDPH)", Jerome  
(HHS/OASH)", Monique K.", Jessica  
(USDA.GOV)", "DC",  
"danny.shiau@usuhs.edu", Jerome (CTR)", Jay  
J", Joselito", "Will Gaskins", "Kevin  
Montgomery", Linda L", "LLogandakar",  
"rajeev.venkayya@takeda.com"

Sent: Saturday March 14 2020 12:44:37PM

Subject: Re: Red Dawn Raging Start March 4

This is so very sad, yes, everything we talked about and everything we have anticipated. Yes, you can see from the curves in the graphs when they have the first confirmed death, they're **at least 2 weeks behind**. I don't understand the screening at the airport, not even a little advice on self-quarantine coming in from any countries. Yes, children will die too if they have no support in the hospitals. There are

many with co-existing conditions. Beds are critical. That is all I am counting (when we have one bed, we need everything that goes with it in the support). Healthcare workers and anyone in service to assist this covid-19 operations must stay healthy. But of course we know they will be quarantined at some stage. I know people may think school closure is over-reacting. It isn't if you think about the inter-dependencies. **You can imagine a million different scenarios. Just a simply one --** a little child got infected from school. He came home and infected his mother who was a nurse. The nurse went to work without any noticeable symptoms, and she infected the ICU patients that she cared for. Ok, this is one case -- and again -- one case is ALL we need to worry about. The cascading effect -- we don't want to even think about.

But as a country, we must fight for everyone and every state. I truly believe and in my calculations, those states that took the pre-emptive steps -- they are going to have the resources to contain their own infection and at some point, can help those states in needs. Here we go about sending patients around -- not 7 -- but many -- when we must lend the help when needed (and if we could do so at all). Now, everyone is fighting their local fire, and it's already quite stressful for everyone. I don't even know if anyone has extra resources. It is really resource-intense. Can you imagine -- India, and the African countries start to pick up? It frightens me. Hence pre-emptive is a must.

<https://newton.isye.gatech.edu/DrLee/>

mobile:

Sent with [ProtonMail](#) Secure Email.

----- Original Message -----

On Saturday, March 14, 2020 10:25 AM,  
Lawler, James V <james.lawler@unmc.edu>  
wrote:

From a friend of a med school  
classmate on Facebook (so caveat  
as you will)

“MT: So if you're not here in  
Kirkland Washington, let me give  
you an update on our not so little  
town.

Our local hospital, Evergreen, one  
of the top-ranked hospitals in the  
country and literally at ground

zero in the fight against  
Coronavirus has run out of beds as  
of today. The staff is exhausted,  
demoralized, and supplies are  
running low.

Because so many staff members  
are sick, and the operational tempo  
is so high, medical staff told to be  
in quarantine due to exposure, but  
not showing symptoms have been  
summoned back to work. So far  
65 patients have entered the  
hospital positive for COVID-19,  
15 didn't leave alive (as of 3/10).

Tom Douglas, multiple James  
Beard Award winner is closing  
down 12 of his 13 restaurants  
(only leaving one open because of  
a contract with a hotel) because  
business is down 90%.

Boeing, which was a hot mess with  
the 737-MAX issue, to begin with,  
is now losing more orders than it is  
getting as the airline industry  
braces for a 70% reduction in air  
travel. At the basement of 9/11,  
global air travel was off 40%.

Norwegian Cruiselines,  
headquartered in Seattle, has been  
called out for lying to customers  
about the safety of their ships, their  
capacity to protect passengers and  
making it difficult to cancel or  
reschedule trips.

Starbucks has announced they will be limited seating in their stores and ones with drive-thru will go drive-thru only.

The Seattle Mariners have moved their home openers out of the area, for now, my guess is the MLB will follow every other sports league and suspend the start of baseball.

Our school district has suspended classes until March 27, but my guess is it will go longer. Issaquah, a town nearby has suspended classes until April 24.

I was in our nearest grocery store, which is a flagship "Fred Meyer" store (Kroger corp) and all of the staples aisles were close to empty. Beans, rice, flour, pasta. Beans about wiped out, the only rice I could find was a 5-pound bag in the Asian section. Only the high-end "boutique" pasta and a few more complex dish pasta like lasagna noodles. The Jewish section had some noodles in it, and the Asian section still had some ramen.

There is no traffic. There is an eerie quiet in the air, and although the videos of people racing in Costco are entertaining, I have not seen anyone running in a store to the TP, fights over food, or other resources. There is this strange

calm, but I always remind myself that history has shown we are three hot meals and a warm bed away from wanting to kill each other.

My wife has shared some other stories from her work - nothing sinister or ominous but nothing I can share and nothing that even if I could, I feel ready to share.

We no longer hear about Life Care Center. The federal government finally showed up there and now all news has stopped. The 70+ employees who are all in various states of being sick are still not tested - that we know. One-third of our town fire department is now in quarantine. If there is anything that gives me the creeps it is this. The government showed up and the news stopped.

When we returned from our trip to Africa on 2/26 and went through Customs in Seattle, there was no screening, no questions, no testing, no sorting of passengers. Nothing. Welcome back, stamp of the passport, done. The lines weren't long and the lack of any form of screening at this Asian gateway was disconcerting. It paled in comparison to the strict protocols we went through in Windhoek and Johannesburg, and the announcements and questions in Frankfurt. What we didn't know at that time is from 2/19 to 2/25, 12 patients had died at Life Care Center for unknown reasons, and the first COVID-19 death was on 2/26.

The response to the threat at a federal level was non-existent.

My opinion.

The Seattle area is about two weeks ahead of most of the United States. For those going this is just hype and this is just the flu, come fly here and see for yourself. I mean flights are cheap and planes are empty. Can even offer you a place to sleep.(no not really, but Kirkland has plenty of hotels)

The Seattle area is probably 2 to 3 weeks behind Iran or Italy at this point. The tidal wave is coming, I believe most in the general public are just in denial about it at this point.

In Italy Coronavirus is killing young and old alike because once you run out of beds, once you run out of breathing machines, Coronavirus becomes an equal opportunity killer. You get pneumonia, your lungs fill up, you basically drown.

When you can get advanced care, your survival odds are very good.

Once that system falls apart, it is first come first serve, and how healthy are you. A lot of younger Americans are very unhealthy with multiple comorbidity factors.

Evergreen Hospital ran out of beds today.

Winter is coming.”

James Lawler, MD, MPH, FIDSA

Director, International Programs  
& Innovation

Global Center for Health Security,  
and

Associate Professor of Medicine

Division of Infectious Diseases

University of Nebraska Medical  
Center

m:

[james.lawler@unmc.edu](mailto:james.lawler@unmc.edu)

<2C4EE4AF32384D10986ED17D  
25126D99.png>



**From:** Carter Mecher

**Sent:** Saturday, March 14, 2020  
4:32:54 PM

**To:** Parker Jr, Gerald W  
<gparker@cvm.tamu.edu>; Dr.  
Eva K Lee <evalee-

**Cc:** Lawler, James V  
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rajeev.venkayya@takeda.com  
<rajeev.venkayya@takeda.com>  
**Subject:** RE: Red Dawn Raging  
Start March 4

Non-UNMC email

Is anyone at CDC monitoring ILI?

Here is the latest flu surveillance for Hong Kong, South Korea, US; the states of CA, OR, WA, TX; and the cities of Seattle, NYC, and Chicago (LA hasn't reported week 10 yet).

Why did the US ILI curve deflect up this week, while influenza positive tests are tracing down? Seeing the same wrt ILI increasing in WA, OR, Seattle, Chicago, and NYC. Is this influenza A, COVID, or both? Chicago and NYC are concerning because their influenza virus detection is going down and ILI is going up.

---

**From:** Carter Mecher

**Sent:** Saturday, March 14, 2020  
7:58 AM

**To:** Parker Jr, Gerald W; Dr. Eva K Lee; \_\_\_\_\_

**Cc:** Lawler, James V; Caneva, Duane; Tom Bossert; Hanfling, Dan; Gruber, David (DSHS); Dr. Eva Lee; CHRISTOPHER ALLEN; Richard Hatchett; McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON; Dodgen, tDanielt(OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH ); Adams, Jerome

(HHS/OASH); Mansoura,  
Monique K.; Fantinato, Jessica  
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danny.shiau@usuhs.edu; Cordts,  
Jerome (CTR); Schnitzer, Jay J;  
Ignacio, Joselito; Will Gaskins;  
Kevin Montgomery; Logan, Linda  
L; LLogandakar;  
rajeev.venkayya@takeda.com

**Subject:** RE: Red Dawn Raging  
Start March 4

Most of you have been involved in table top exercises of an outbreak. In those exercises they commonly show a map of the US with the number of cases noted and extent of spread. At various points in the scenario, a facilitator will ask the participants what actions should be taken. I took the graphic of the US map from the NYTimes and created a PowerPoint movie from Mar 4 (the first day that the NYTimes presented that map) through today.

In this scenario, the facilitator pauses now on March 14. At this point the virus has already spread to more than 120 countries. The virus is highly transmissible with an Ro of about 2.5 and has a CFR of 0.5%-1.0%. The elderly and those with chronic medical conditions are at greatest risk.

The response has been hindered by serious delays in the ability to confirm disease with diagnostic testing. This testing capacity is limited. Case ascertainment is limited due to the testing constraints. It is believed that over the next two weeks capacity for

testing should improve. However, the demand for testing is anticipated to increase exponentially over the next 2 weeks. A few areas in the US have been particularly hard hit—Washington and California.

The current US case count is 2,654 with 49 deaths. What actions would you take on March 14?

Sent from [Mail \[go.microsoft.com\]](mailto:go.microsoft.com)  
for Windows 10

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**From:** [Parker Jr, Gerald W](#)

**Sent:** Saturday, March 14, 2020  
12:49 AM

**To:** [Carter Mecher](#); [Dr. Eva K Lee](#);

**Cc:** [Lawler, James V](#); [Caneva, Duane](#); [Tom Bossert](#); [Hanfling, Dan](#); [Gruber, David \(DSHS\)](#); [Dr. Eva Lee](#); [CHRISTOPHER ALLEN](#); [Richard Hatchett](#); [McDonald, Eric](#); [Borio, Luciana](#); [Brian Benson](#); [Tracey McNamara](#); [Baric, Ralph S](#); [Mecher, Carter \(VA.GOV\)](#); [Hunt, Richard \(OS/ASPR/EMMO\)](#); [WILKINSON, THOMAS; M.D.](#); [David](#); [Charity A@CDPH](#); [Gregory J](#); [Walters, William \(STATE.GOV\)](#); [HAMILTON, CAMERON](#); [Dodgen, tDanielt\(OS/ASPR/SPPR\)](#); [DeBord, Kristin \(OS/ASPR/SPPR\)](#); [Phillips, Sally \(OS/ASPR/SPPR\)](#); [Matthew J](#)

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**Subject:** Re: Red Dawn Raging  
Start March 4

Carter, thank you for the excellent analysis... I totally agree. I am sure that we will start seeing second guessing because of the politico article and the CDC guidance. I know that I will need to start preparing a response to authorities in Texas and in my university. your analysis is very helpful.

Keep up the good fight!!

Gerry Parker

**From:** Carter Mecher

**Sent:** Friday, March 13, 2020

7:13:19 PM

**To:** Dr. Eva K Lee;

**Cc:** Lawler, James V; Parker Jr, Gerald W; Caneva, Duane; Tom Bossert; Hanfling, Dan; Gruber, David (DSHS); Dr. Eva Lee; CHRISTOPHER ALLEN; Richard Hatchett; McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON; Dodgen, tDanielt(OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH ); Adams, Jerome (HHS/OASH); Mansoura, Monique K.; Fantinato, Jessica (USDA.GOV); DC; danny.shiau@usuhs.edu; Cordts, Jerome (CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; Kevin Montgomery; Logan, Linda L; LLogandakar; rajeev.venkayya@takeda.com  
**Subject:** RE: Red Dawn Raging Start March 4



I don't think the intent is to close schools for only 2 weeks. Longer term school closure will be necessary.

What CDC is not accounting for is that we have been flying blind for weeks with essentially no surveillance. This was due to the delays associated with the diagnostic test developed by CDC and the very narrow CDC definition of a PUI that really hampered our ability to even identify community transmission. We have raised this concern repeatedly. Our general sense was that community transmission was already occurring several weeks ago (and we stated so at the time over email and on conference calls), but nobody could prove it because CDC would only perform confirmatory testing on cases meeting the PUI definition. And the PUI criteria by definition excluded any potential case of community transmission. It was very circular. CDC placed state and local public health in a bit of a Catch 22.

So after a long delay we finally have the ability to test more broadly. If you recall, CDC only expanded the PUI incrementally at first to include severely ill patients with no travel hx or link to a known case. It was only later that testing was opened up more broadly. Can a model incorporate that amount of confusion into the initial conditions?

Once testing began in earnest, the numbers of cases exploded. It was like popcorn (also as we predicted). Cases were appearing everywhere. I would challenge anyone to provide an accurate estimate of prevalence in the US. I'd be interested in how certain they would be of that estimate +/-?

The difference between models and real life is that with models we can set the parameters. How would they model what happened in Italy? On Feb 20, they had 3 cases and no deaths. This is what happened since:

| Italy  |            |               |                          |
|--------|------------|---------------|--------------------------|
| Date   | Cum Deaths | Cum Confirmed | Critical Condition (ICU) |
| 30-Jan | 0          | 2             |                          |
| 31-Jan | 0          | 2             |                          |
| 7-Feb  | 0          | 3             |                          |
| 20-Feb | 0          | 3             | 2                        |
| 21-Feb | 1          | 20            | 6                        |
| 22-Feb | 2          | 63            | 7                        |

|        |     |       |     |
|--------|-----|-------|-----|
| 23-Feb | 3   | 155   | 26  |
| 24-Feb | 7   | 229   | 23  |
| 25-Feb | 11  | 322   | 19  |
| 26-Feb | 12  | 453   |     |
| 27-Feb | 17  | 655   |     |
| 28-Feb | 21  | 889   | 64  |
| 29-Feb | 29  | 1,128 | 105 |
| 1-Mar  | 34  | 1,694 | 140 |
| 2-Mar  | 52  | 2,036 | 166 |
| 3-Mar  | 79  | 2,502 |     |
| 4-Mar  | 107 | 3,089 | 295 |
| 5-Mar  | 148 | 3,858 | 351 |
| 6-Mar  | 197 | 4,636 | 462 |
| 7-Mar  | 233 | 5,833 | 567 |

|        |       |        |       |
|--------|-------|--------|-------|
| 8-Mar  | 366   | 7,375  | 650   |
| 9-Mar  | 463   | 9,172  | 733   |
| 10-Mar | 631   | 10,149 | 877   |
| 11-Mar | 827   | 12,264 | 1,028 |
| 12-Mar | 1,016 | 15,113 | 1,153 |
| 13-Mar | 1,266 | 17,660 | 1,328 |

The difference between models and real life is that with models we can set the parameters as if they are known. In real life, these parameters are as clear as mud.

To check the accuracy of the model for predicting real life, I would ask that they run Italy for us to show us how well handwashing and isolation would work. How would they model what happened in Italy? On Feb 20, Italy had 3 cases and no deaths. On that day the modelers and the guidance CDC just released would not advise to take any aggressive action. On Feb 21, they had 1 death and 20 cases with 6 patients in the ICU. This is a country of 51 M. What would CDC guidance have advised Italy to do on Feb 21? On Feb 22, Italy had a cumulative total of 2 deaths, 63 cases with 7 patients in the ICU. How would CDC have described what was going on in Italy? Would this meet their definition of widespread community transmission? I doubt it. CDC and the CDC modeler would have recommended sitting tight. Italy responded extremely aggressively. This is what happened since. I think the public health officials and political leaders in Italy acted very quickly and very aggressively—much more quickly and aggressively than what we did when the outbreak began in Seattle two weeks ago. I would ask the modeler and CDC when they would have pulled the trigger in Italy. We have the actual data. The modeler can run his models and can point out what he/she would do and when it should be done. I suspect early on in Italy we would have heard exactly what we are hearing now.

I don't pretend to have perfect knowledge of the extent of disease in the US. There is a lot of uncertainty. But given this uncertainty, isn't the safest approach to close the schools until we know more? We can always reopen the schools. If we

delay our response and the outbreak takes off like Italy, we will have made a terrible gamble with the lives of Americans, over what, an extend spring break? Which side of the bet would you take if you were the responsible official (mayor, governor, public health official)?

Again, nobody is advocating a short closure of schools. I don't think it would be prudent to play it cute and try to play chicken with this virus and hold out to the last moment to pull the trigger. It is like thinking you can time the market. You don't do that when thousands of lives potentially hang in the balance. That is what I would tell my mayor, or my governor, or my President.

Sent from [Mail](#) for Windows 10

---

**From:** [Dr. Eva K Lee](#)

**Sent:** Friday, March 13, 2020 7:16 PM

**To:**

**Cc:** [Lawler, James V](#); [Parker Jr, Gerald W](#); [Caneva, Duane](#); [Tom Bossert](#); [Hanfling, Dan](#); [Gruber, David \(DSHS\)](#); [Dr. Eva Lee](#); [CHRISTOPHER ALLEN](#); [Richard Hatchett](#); [McDonald, Eric](#); [Borio, Luciana](#); [Brian Benson](#); [Tracey McNamara](#); [Baric, Ralph S](#); [Mecher, Carter \(VA.GOV\)](#); [Hunt, Richard \(OS/ASPR/EMMO\)](#); [WILKINSON, THOMAS; M.D.](#); [David; Charity A@CDPH](#); [Gregory J; Walters, William \(STATE.GOV\)](#); [HAMILTON, CAMERON](#); [Dodgen, tDanielt\(OS/ASPR/SPPR\)](#); [DeBord, Kristin \(OS/ASPR/SPPR\)](#); [Phillips, Sally \(OS/ASPR/SPPR\)](#); [Matthew J CIV USARMY \(USA\)](#); [Lisa Koonin](#); [HARVEY, MELISSA](#); [WOLFE, HERBERT](#); [Eastman, Alexander](#); [EVANS, MARIEFRED](#); [jwleduc@utmb.edu](#); [Johnson, Robert \(OS/ASPR/BARDA\)](#); [Yeskey, Kevin](#); [Disbrow, Gary \(OS/ASPR/BARDA\)](#); [Redd, John \(OS/ASPR/SPPR\)](#); [Hassell, David \(Chris\) \(OS/ASPR/IO\)](#); [Hamel, Joseph \(OS/ASPR/IO\)](#); [Wade, David](#); [TARANTINO, DAVID A](#); [KAUSHIK, SANGEETA](#); [Lee, Scott \(OS/ASPR/EMMO\)](#); [Larry G](#); [Ryan Morhard](#); [Steven Jt\(tCHFStDPH \)](#); [Adams, Jerome \(HHS/OASH\)](#); [Mansoura, Monique K.](#); [Fantinato, Jessica \(USDA.GOV\)](#); [DC](#); [danny.shiau@usuhs.edu](#); [Cordts, Jerome \(CTR\)](#); [Schnitzer, Jay J](#); [Ignacio, Joselito](#); [Will Gaskins](#); [Kevin Montgomery](#); [Logan, Linda L](#); [LLogandakar](#); [rajeev.venkayya@takeda.com](#)

**Subject:** Re: Red Dawn Raging Start March 4

By the way, Google is funny, part of their work will be re-inventing RealOpt -- the system we have already put in place since 2009 and have continuous development CBRN capabilities and currently have 14,000 public health emergency response users. We have real-life drive-through models (all models have real-life data), dynamic real-time optimal resource allocation engine, optimal locations of facilities, optimal throughput and capacity. We even have pediatric and special needs, and language and socio-economic background etc. There's also the intra-facility disease spread models built-in, plus many more.

But I am sure with 1700 engineers, they will have at least 1,700 features. :).

<https://newton.isye.gatech.edu/DrLee/>

mobile:

Sent with [ProtonMail](#) Secure Email.

----- Original Message -----

On Friday, March 13, 2020 6:51 PM,

wrote:

All,

I would question the underlying models being used, it's all in the assumptions, they drive the results. And as to the places that did well without school closures, each caught the epidemic

before substantial  
transmission, this  
guidance is logically  
flawed.

Robert Glass

Sent from my iPhone

On Mar  
13, 2020,  
at 4:33  
PM,  
Lawler,  
James V  
<james.la  
wler@un  
mc.edu>  
wrote:

CDC is  
really  
missing  
the mark  
here. By  
the time  
you have  
“substanti  
al  
communit  
y  
transmissi  
on” it is  
too late.  
It’s like  
ignoring  
the  
smoke  
detector  
and  
waiting  
until your  
entire  
house is

on fire to  
call the  
fire dept.  
Plus, how  
are you  
supposed  
to know  
when you  
have  
communit  
y  
transmissi  
on when  
they  
haven't  
been able  
to  
provide a  
diagnosti  
c assay  
that can  
be used  
widely  
and at  
high  
volume?

**James  
Lawler,  
MD,  
MPH,  
FIDSA**

m:  
703.407.  
6431

james.law  
ler@unm  
c.edu



---

**From:**

"Parker  
Jr, Gerald  
W"

<gparker  
@cvm.ta  
mu.edu>

**Date:**

Saturday,  
March  
14, 2020  
at 1:16  
AM

**To:**

"Caneva,  
Duane"  
<duane.c  
aneva@h  
q.dhs.gov  
>, Tom  
Bossert  
<tom.bos  
sert@me.  
com>

**Cc:**

"cmecher  
@charter.  
net"  
<cmecher  
@charter.  
net>, Dan  
Hanfling  
<DHanfli  
ng@iqt.o  
rg>, "Dr.  
Eva K  
Lee"  
<evalee-  
gatech@

"Gruber,  
David  
(DSHS)"  
<David.G  
ruber@ds  
hs.texas.g  
ov>, "Dr.  
Eva Lee"  
<eva.eval  
ee.lee64  
@gmail.c  
om>,  
"Lawler,  
James V"  
<james.la  
wler@un

mc.edu>  
CHRIST  
OPHER  
ALLEN  
<chrisalle  
n\_10@ms  
n.com>  
"jamison.  
day@gma  
il.com"  
<jamison.  
day@gma  
il.com>  
Richard  
Hatchett  
<richard.  
hatchett  
@cepi.ne  
t>  
"McDona  
ld, Eric"  
<Eric.Mc  
Donald@  
sdcounty.  
ca.gov>  
"Borio,  
Luciana"  
<LBorio  
@iqt.org  
>, Brian  
Benson  
<brian.be  
nson@icl  
oud.com  
>, Tracey  
McNama  
ra  
<tmcNam  
ara@west  
ernu.edu  
>, "Baric,  
Ralph S"  
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email.unc  
.edu>  
"Mecher,  
Carter  
(VA.GO  
V)"  
<carter.m  
echer@va  
.gov>  
"Hunt,  
Richard  
(OS/ASP  
R/EMM

O)"  
<Richard.  
Hunt@hh  
s.gov>,  
"WILKI  
NSON,  
THOMA  
S"  
<THOM  
AS.WIL  
KINSON  
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gov>,  
"Callahan  
, m."  
<MVCA  
LLAHA  
N@mgh.  
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zzi@som.  
umarylan  
d.edu>,  
"Charity  
A@CDP  
H"  
<Charity.  
Dean@cd  
ph.ca.gov  
>,  
Gregory J  
<MartinG  
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ov>,  
"Walters,  
William  
(STATE.  
GOV)"  
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wa2@stat  
e.gov>,  
"HAMIL  
TON,  
CAMER  
ON"  
<cameron  
.hamilton  
@hq.dhs.  
gov>,  
"rjglassjr  
@gmail.c  
om"  
<rjglassjr  
@gmail.c

om>,  
"Dodgen,  
tDanielt(  
OS/ASP  
R/SPPR)  
"

<daniel.d  
odgen@h  
hs.gov>,  
"DeBord,  
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(OS/ASP  
R/SPPR)  
"

<Kristin.  
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>,  
"Phillips,  
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R/SPPR)  
"

<Sally.Ph  
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Y  
(USA)"

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Lisa

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"HARVE  
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,  
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T"

<HERBE  
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,  
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RED"

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associates  
.hq.dhs.g  
ov>,  
"jwleduc

@utmb.e  
du"

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@utmb.e  
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"Johnson,

Robert  
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R/BARD  
A)"

<Robert.J  
ohnson@  
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"Yeskey,

Kevin"

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s.gov>,  
"Disbrow

, Gary  
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A)"

<Gary.Di  
sbrow@h  
hs.gov>,  
"Redd,

John  
(OS/ASP  
R/SPPR)  
"

<John.Re  
dd@hhs.g  
ov>,  
"Hassell,

David  
(Chris)  
(OS/ASP  
R/IO)"

<David.H  
assell@hhs.gov>,  
"Hamel,  
Joseph  
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<Joseph.  
Hamel@hhs.gov>,  
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David"  
<david.wade@hq.dhs.gov>,  
"TARANTINO,  
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A"  
<david.arantino@cbp.dhs.gov>,  
"KAUSHIK,  
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TA"  
<sangeeta.kaushik@hq.dhs.gov>,  
"Lee,  
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<Scott.Lee@hhs.gov>, Larry  
G  
<PadgetL  
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Ryan  
Morhard  
<Ryan.Morhard@weforum.org>,  
"Steven  
Jt(tCHFS  
tDPH )"  
<steven.stack@ky.gov>,  
"Adams,

Jerome  
(HHS/O  
ASH)"  
<Jerome.  
Adams@  
hhs.gov>,  
"Mansour  
a,  
Monique  
K."  
<mmanso  
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e.org>,  
"Fantinat  
o, Jessica  
(USDA.  
GOV)"  
<jessica.f  
antino  
@usda.go  
v>, DC  
<michelle  
.colby@u  
sda.gov>,  
"danny.sh  
iau@usuh  
s.edu"  
<danny.s  
hiau@usu  
hs.edu>,  
"Cordts,  
Jerome  
(CTR)"  
<jerome.c  
ordts@as  
sociates.h  
q.dhs.gov  
>,  
"Schnitze  
r, Jay J"  
<jschnitz  
er@mitre  
.org>,  
"Ignacio,  
Joselito"  
<joselito.i  
gnacio@f  
ema.dhs.g  
ov>, Will  
Gaskins  
<will.gas  
kins@efii  
a.com>,  
Kevin  
Montgom  
ery

<kevin@collaborate.org>,  
"Logan, Linda L"  
<llogan@cvm.tamu.edu>,  
LLogandakar  
<llogandakar@gmail.com>,  
"rajeev.venkayya@takeda.com"  
<rajeev.venkayya@takeda.com>  
**Subject:**  
Re: Red Dawn Raging Start  
March 4

Non-UNMC email

CDC school closure guidance

<https://www.cdc.gov/coronavirus/2019-ncov/downloads/considerations-for-school-closure.pdf>



**From:**

Caneva,  
Duane  
<duane.c  
aneva@h  
q.dhs.gov  
>

**Sent:**

Friday,  
March  
13, 2020  
5:08 PM

**To:** Tom

Bossert;  
Parker Jr,  
Gerald W

**Cc:**

cmecher  
@charter.  
net;  
Hanfling,  
Dan; Dr.  
Eva K  
Lee;  
Gruber,D  
avid  
(DSHS);  
Dr. Eva  
Lee;  
Lawler,  
James V;  
CHRIST  
OPHER  
ALLEN;  
jamison.d  
ay@gmail  
.com;  
Richard  
Hatchett;  
McDonal  
d, Eric;  
Borio,  
Luciana;  
Brian  
Benson;  
Tracey  
McNama  
ra; Baric,

Ralph S;  
Mecher,  
Carter  
(VA.GO  
V); Hunt,  
Richard  
(OS/ASP  
R/EMM  
O);  
WILKIN  
SON,  
THOMA  
S; M.D.;  
David;  
Charity  
A@CDP  
H;  
Gregory  
J;  
Walters,  
William  
(STATE.  
GOV);  
HAMILT  
ON,  
CAMER  
ON;  
rjglassjr  
@gmail.c  
om;  
Dodgen,t  
Danielt(O  
S/ASPR/  
SPPR);  
DeBord,  
Kristin  
(OS/ASP  
R/SPPR);  
Phillips,  
Sally  
(OS/ASP  
R/SPPR);  
Matthew  
J CIV  
USARM  
Y (USA);  
Lisa  
Koonin;  
HARVE  
Y,  
MELISS  
A;  
WOLFE,  
HERBER  
T;  
Eastman,

Alexander;  
EVANS,  
MARIEF  
RED;  
jwleduc@  
utmb.edu;  
Johnson,  
Robert  
(OS/ASP  
R/BARD  
A);  
Yeskey,  
Kevin;  
Disbrow,  
Gary  
(OS/ASP  
R/BARD  
A); Redd,  
John  
(OS/ASP  
R/SPPR);  
Hassell,  
David  
(Chris)  
(OS/ASP  
R/IO);  
Hamel,  
Joseph  
(OS/ASP  
R/IO);  
Wade,  
David;  
TARAN  
TINO,  
DAVID  
A;  
KAUSHI  
K,  
SANGEE  
TA; Lee,  
Scott  
(OS/ASP  
R/EMM  
O); Larry  
G; Ryan  
Morhard;  
Steven  
Jt(tCHFS  
tDPH );  
Adams,  
Jerome  
(HHS/O  
ASH);  
Mansoura

Monique  
K.;  
Fantinato  
, Jessica  
(USDA.  
GOV);  
DC;  
danny.shi  
au@usuh  
s.edu;  
Cordts,  
Jerome  
(CTR);  
Schnitzer,  
Jay J;  
Ignacio,  
Joselito;  
Will  
Gaskins;  
Kevin  
Montgom  
ery;  
Logan,  
Linda L;  
LLogand  
akar;  
rajeev.ve  
nkayya@t  
akeda.co  
m  
**Subject:**  
Re: Red  
Dawn  
Raging  
Start  
March 4

We  
should  
measure  
it in  
different  
communit  
ies and  
find out.

Get  
Outlook  
for iOS

**From:**

Tom  
Bossert  
<tom.bos  
sert@me.  
com>

**Sent:**

Friday,  
March  
13, 2020  
6:07:00  
PM

**To:**

Parker Jr,  
Gerald W  
<gparker  
@cvm.ta  
mu.edu>

**Cc:**

cmecher  
@charter.  
net  
<cmecher  
@charter.  
net>;  
Hanfling,  
Dan  
<DHanfli  
ng@iqt.o  
rg>; Dr.  
Eva K  
Lee  
<evalee-  
gatech@

Gruber,D  
avid  
(DSHS)  
<David.G  
ruber@ds  
hs.texas.g  
ov>;  
Caneva,  
Duane  
<duane.c  
aneva@h  
q.dhs.gov  
>; Dr.  
Eva Lee  
<eva.eval

ee.lee64  
@gmail.c  
om>;  
Lawler,  
James V  
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CHRIST  
OPHER  
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<chrisalle  
n\_10@ms  
n.com>;  
jamison.d  
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.com  
<jamison.  
day@gma  
il.com>;  
Richard  
Hatchett  
<richard.  
hatchett  
@cepi.ne  
t>;  
McDonal  
d, Eric  
<Eric.Mc  
Donald@  
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Borio,  
Luciana  
<LBorio  
@iqt.org  
>; Brian  
Benson  
<brian.be  
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oud.com  
>; Tracey  
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ra  
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ernu.edu  
>; Baric,  
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Mecher,  
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Richard  
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s.gov>;  
WILKIN  
SON,  
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<THOM  
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M.D.  
<MVCA  
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N@mgh.  
harvard.e  
du>;  
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<DMarco  
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umarylan  
d.edu>;  
Charity  
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<Charity.  
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ph.ca.gov  
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Walters,  
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(STATE.  
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wa2@stat  
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HAMILT  
ON,  
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ON  
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gov>;  
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om  
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@gmail.c  
om>;  
Dodgen,t  
Danielt(O  
S/ASPR/  
SPPR)  
<daniel.d  
odgen@h  
hs.gov>;  
DeBord,  
Kristin  
(OS/ASP  
R/SPPR)  
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DeBord  
@hhs.gov  
>;  
Phillips,  
Sally  
(OS/ASP  
R/SPPR)  
<Sally.Ph  
illips@hh  
s.gov>;  
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J CIV  
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hs.gov>;  
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A)  
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ohnson@  
hhs.gov>;  
Yeskey,  
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Disbrow,  
Gary  
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hs.gov>;  
Redd,  
John  
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R/SPPR)  
<John.Re  
dd@hhs.g  
ov>;  
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(Chris)  
(OS/ASP  
R/IO)  
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Hamel,  
Joseph  
(OS/ASP  
R/IO)  
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Wade,  
David  
<david.w  
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TARAN  
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KAUSHI  
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SANGEE  
TA  
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.kaushik  
@hq.dhs.  
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Lee,  
Scott  
(OS/ASP  
R/EMM  
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<Scott.Le  
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v>; Larry  
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<PadgetL  
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Morhard  
<Ryan.M  
orhard@  
weforum.  
org>;  
Steven  
Jt(tCHFS  
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Adams,  
Jerome  
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Mansoura  
,  
Monique  
K.  
<mmanso  
ura@mitr  
e.org>;  
Fantinato  
, Jessica  
(USDA.  
GOV)  
<jessica.f  
antino  
@usda.go  
v>; DC  
<michelle  
.colby@u  
sda.gov>;  
danny.shi  
au@usuh  
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hiau@usu  
hs.edu>;  
Cordts,  
Jerome  
(CTR)  
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>;  
Schnitzer,  
Jay J  
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er@mitre  
.org>;  
Ignacio,  
Joselito  
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gnacio@f  
ema.dhs.g  
ov>; Will  
Gaskins  
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a.com>;  
Kevin  
Montgom  
ery  
<kevin@  
collaborat

e.org>,  
Logan,  
Linda L  
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.edu>;  
LLogand  
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<lloganda  
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.com>;  
rajeev.ve  
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akeda.co  
m  
<rajeev.v  
enkayya  
@takeda.  
com>

**Subject:**

Re: Red  
Dawn  
Raging  
Start  
March 4

**CAUTION**  
: This  
email  
originated  
from  
outside of  
DHS. DO  
NOT click  
links or  
open  
attachment  
s unless  
you  
recognize  
and/or trust  
the sender.  
Contact  
your  
component  
SOC with  
questions  
or  
concerns.

That  
article

snippet  
seems  
misleading.  
I  
wonder if  
the CDC  
guidance  
it's based  
on is  
equally  
unclear.

-Tom

On Mar 13, 2020, at 6:04 PM, Parker Jr, Gerald W  
<gparker@cvm.tamu.edu> wrote:

Carter and others - article just published in Politico Pro.  
CDC suggests school closures will not have much impact.  
There is a discussion of short term versus longer term... Is  
this misleading? What are your thoughts?

<pastedImage.png>

**From:**

**Sent:** Friday, March 13, 2020 4:35 PM

**To:**

**Cc:** 'Hanfling, Dan'; 'Dr. Eva K Lee'; 'Gruber,David (DSHS)';  
'Caneva, Duane'; 'Dr. Eva Lee'; 'Lawler, James V';  
'CHRISTOPHER ALLEN'; 'Tom  
Bossert'; Parker Jr, Gerald W; 'Richard Hatchett'; 'McDonald,  
Eric'; 'Borio, Luciana'; 'Brian Benson'; 'Tracey McNamara';  
'Baric, Ralph S'; 'Mecher, Carter (VA.GOV)'; 'Hunt, Richard  
(OS/ASPR/EMMO)'; 'WILKINSON, THOMAS'; 'M.D.';  
'David'; 'Charity A@CDPH'; 'Gregory J'; 'Walters, William  
(STATE.GOV)'; 'HAMILTON, CAMERON';  
'Dodgen,tDanielt(OS/ASPR/SPPR)';  
'DeBord,Kristin (OS/ASPR/SPPR)'; 'Phillips, Sally  
(OS/ASPR/SPPR)'; 'Matthew J CIV USARMY (USA)'; 'Lisa  
Koonin'; 'HARVEY, MELISSA'; 'WOLFE, HERBERT';  
'Eastman, Alexander'; 'EVANS, MARIEFRED';  
'jwleduc@utmb.edu'; 'Johnson, Robert (OS/ASPR/BARDA)';  
'Yeskey, Kevin'; 'Disbrow, Gary (OS/ASPR/BARDA)';

'Redd, John (OS/ASPR/SPPR)'; 'Hassell, David (Chris) (OS/ASPR/IO)'; 'Hamel, Joseph (OS/ASPR/IO)'; 'Wade, David'; 'TARANTINO, DAVID A'; 'KAUSHIK, SANGEETA'; 'Lee, Scott (OS/ASPR/EMMO)'; 'Larry G'; 'Ryan Morhard'; 'Steven Jt(tCHFStDPH )'; 'Adams, Jerome (HHS/OASH)'; 'Mansoura, Monique K.'; 'Fantinato, Jessica (USDA.GOV)'; 'DC'; 'danny.shiau@usuhs.edu'; 'Cordts, Jerome (CTR)'; 'Schnitzer, Jay J'; 'Ignacio, Joselito'; 'Will Gaskins'; 'Kevin Montgomery'; Logan, Linda L; 'LLogandakar'; 'rajeev.venkayya@takeda.com'

**Subject:** RE: Red Dawn Raging Start March 4

A cruise ship passenger in the Caribbean now

FIRST COVID-19 CASE DIAGNOSED IN CAYMANS – The Public Health Department confirms that one of the persons tested recently for the novel coronavirus has tested positive. “The patient is a visitor who was transferred from a cruise ship for a critical cardiac issue,” said Medical Health Officer, Dr. Samuel Williams-Rodriguez. Dr. Williams continued, “The patient was doing well but subsequently developed breathing difficulties, was isolated and a test taken has confirmed is suffering with the novel coronavirus.

More countries and overseas territories reporting their first cases:

Gabon

Ghana

Trinidad and Tobago

Kazakhstan

Kosovo

Suriname

Aruba

Guadeloupe

Cayman Islands

Uruguay 4

Venezuela 2

Guatemala 1

Kenya 1

Sudan 1

Ethiopia 1

-----

From:  
To: Dan"  
Cc: "Dr. Eva K Lee",David (DSHS)", Duane", "Dr. Eva Lee", James V", "CHRISTOPHER ALLEN",  
"Tom Bossert", Gerald W",  
"Richard Hatchett", Eric", Luciana", "Brian Benson",  
"Tracey McNamara", Ralph S", Carter (VA.GOV)", Richard (OS/ASPR/EMMO)", THOMAS", "M.D.", "David",  
"Charity A@CDPH", "Gregory J", William (STATE.GOV)", CAMERON",  
  
(OS/ASPR/SPPR)", Sally (OS/ASPR/SPPR)", "Matthew J CIV USARMY (USA)", "Lisa Koonin", MELISSA", HERBERT", Alexander", MARIEFRED",  
"jwleduc@utmb.edu", Robert (OS/ASPR/BARDA)", Kevin", Gary (OS/ASPR/BARDA)", John (OS/ASPR/SPPR)", David (Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", David", DAVID A", SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", "Ryan Morhard", "Steven Jt(tCHFStDPH )", Jerome (HHS/OASH)", Monique K.", Jessica (USDA.GOV)", "DC", "danny.shiau@usuhs.edu", Jerome (CTR)", Jay J", Joselito", "Will Gaskins", "Kevin Montgomery", Linda L", "LLogandakar",  
"rajeev.venkayya@takeda.com"  
Sent: Friday March 13 2020 2:30:49PM  
Subject: RE: Red Dawn Raging Start March 4

BREAKING: Los Angeles county in California announces

the closure of all schools; this is the 2nd largest school district in the U.S. after NYC

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From: "Hanfling, Dan"  
To: "Dr. Eva K Lee", "Carter Mecher"  
Cc: David (DSHS)", Duane", "Dr. Eva Lee", James V",  
"CHRISTOPHER ALLEN",  
"Tom Bossert", Gerald W", "Richard Hatchett", Eric",  
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(Chris) (OS/ASPR/IO)", Joseph (OS/ASPR/IO)", David",  
DAVID A", SANGEETA", Scott (OS/ASPR/EMMO)",  
"Larry G", "Ryan Morhard", "Steven Jt(tCHFStDPH )",  
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(CTR)", Jay J", Joselito", "Will Gaskins", "Kevin  
Montgomery", Linda L", "LLogandakar",  
"rajeev.venkayya@takeda.com"  
Sent: Friday March 13 2020 2:15:35PM  
Subject: RE: Red Dawn Raging Start March 4

Continuing to work this angle – but it is awfully hard to build the car while we are speeding down the highway – that notwithstanding, we are making incremental progress here.

<https://www.washingtonpost.com/opinions/2020/03/13/your-smart-phone-could-be-essential-fight-against-coronavirus/>

Dan Hanfling, MD

**From:** Dr. Eva K Lee  
**Sent:** Friday, March 13, 2020 2:12 PM  
**To:** Carter Mecher  
**Cc:** Gruber,David (DSHS)



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**Subject:** RE: Red Dawn Raging Start March 4

Yes, virtual care is a must. This will supplement those who are coming in require direct interaction.

Virtual care is needed for at least 4 reasons.

1. To help alleviate the surge of patient requests
2. To allow healthcare workers who are self-quarantine to be able to continue their care for other patients.

We want all the healthcare workers to be healthy. But if they're exposed to positive cases without knowing and have to be quarantine, can be due to exposure from family members or patients, then they are out. Their knowledge and expertise is critical and hence they need to use the tele-health capability to tend to patients.

3. Regular medical needs will be sidelined (as we can see in Italy, basically all scrapped). So we need to expand tele-health to those patients who need to be taken care of (outside covid-19). It is unclear if it is wise for them to walk into the clinic, so they can choose tele-health to get consult and advice.

4. School children may need medical care. Some of them may get healthcare check at school. Now school is out and we need to think about tele-health or mobile clinic.

<https://newton.isye.gatech.edu/DrLee/>

mobile:

Sent with [ProtonMail](#) Secure Email.

----- Original Message -----

On Friday, March 13, 2020 1:34 PM, Carter Mecher  
\_\_\_\_\_ wrote:

David you make a valid point. As the epidemic increases in intensity, the hospital capacity (defined by staffing) decreases as more staff become ill (following the epi curve) and the actions we take to slow the outbreak potentially add to the absenteeism. One thing to think about is how to effectively leverage HCWs who might be home for quarantine or who might be mildly ill and isolated at home or home with children because schools are closed. Bad combination of a surge in patients and short-staffed.

In another conversation we are having, we need to very quickly pivot to virtual care in the outpatient setting. It redefines what outpatient capacity even is.

Sent from Mail for Windows 10

**From:** Dr. Eva K Lee

**Sent:** Friday, March 13, 2020 12:58 PM

**To:** Gruber,David (DSHS)

**Cc:** Caneva, Duane; 'Dr. Eva Lee'; 'Lawler, James V'; 'CHRISTOPHER ALLEN'; 'Tom Bossert'; 'Parker Jr, Gerald W'; 'Richard Hatchett'; 'McDonald, Eric'; 'Borio, Luciana'; 'Brian Benson'; 'Tracey McNamara'; 'Baric, Ralph S'; 'Mecher, Carter (VA.GOV)'; 'Hunt, Richard (OS/ASPR/EMMO)'; WILKINSON, THOMAS; 'M.D.'; 'David'; 'Charity A@CDPH'; 'Gregory J'; 'Walters, William (STATE.GOV)'; HAMILTON, CAMERON; 'Dodgen,tDanielt(OS/ASPR/SPPR)'; 'DeBord,Kristin (OS/ASPR/SPPR)'; 'Phillips, Sally (OS/ASPR/SPPR)'; 'Matthew J CIV USARMY (USA)'; 'Lisa Koonin'; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; 'jwleduc@utmb.edu'; 'Johnson, Robert (OS/ASPR/BARDA)'; Yeskey, Kevin; 'Disbrow, Gary (OS/ASPR/BARDA)'; 'Redd, John (OS/ASPR/SPPR)'; 'Hassell, David (Chris) (OS/ASPR/IO)'; 'Hamel, Joseph (OS/ASPR/IO)'; 'Hanfling, Dan'; Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; 'Lee, Scott (OS/ASPR/EMMO)'; 'Larry G'; 'Ryan Morhard'; 'Steven Jt(tCHFStDPH)'; 'Adams, Jerome (HHS/OASH)'; 'Mansoura, Monique K.'; 'Fantinato, Jessica (USDA.GOV)'; 'DC'; 'danny.shiau@usuhs.edu'; Cordts, Jerome (CTR); 'Schnitzer, Jay J'; Ignacio, Joselito; 'Will Gaskins'; 'Kevin Montgomery'; 'Logan, Linda L'; 'LLogandakar'; 'rajeev.venkayya@takeda.com'

**Subject:** Re: Red Dawn Raging Start March 4

Dave, yes, hosptial resources need to be considered and analyzed and optimized for the best outcome. I

have incorporated some hospital resources in the model but have not plotted the results out for circulation. I will start doing that later today. I can't draw a graph (by hand) like all of you. I am used to running the whole event and see what's happening. It is easier for me that way.

1. rapid testing, 2. timely implementation of NPI 3. Optimize and strategic hospital surge

all of them are inter-dependent in a system network view, not linear. And clearly along these 3 there are many branches of (inter) dependencies coming out that need our attentions.

I will be doing a drive-through screening in DeKalb with the local leaders. Let's hope we get the test kits and the PPE. Does not seem like there's enough of anything.... the logistics chain there is very slow.

<https://newton.isye.gatech.edu/DrLee/>

mobile:

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----- Original Message -----

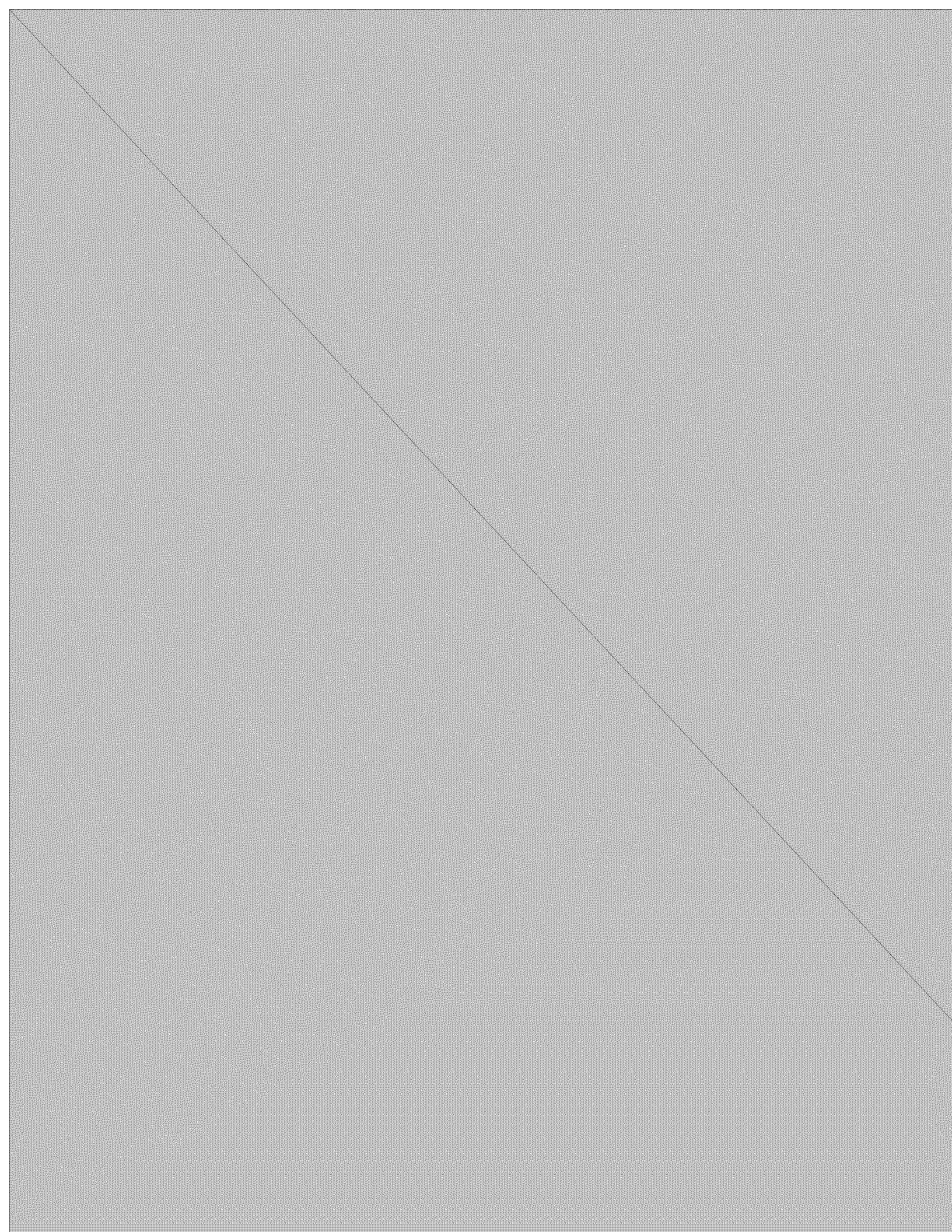
On Friday, March 13, 2020 12:34 PM, Gruber,David

(DSHS) <[David.Grubert@dshs.texas.gov](mailto:David.Grubert@dshs.texas.gov)> wrote:

Much attention is to the graphic showing the impact of flattening the epi-curve on hospitals/healthcare. While I think it gets the point across I also think it is a bit misleading in that the line depicting healthcare capacity is flat.

During this outbreak, the hospital capacity line will drop significantly with an influx in patients even with NPIs and only come back up after modification of processes, reduction in cases or increases in resources are added.

I feel with so much visibility is on testing and NPIs, the focus on hospital and healthcare capacity is lost in the news cycle. Have drawn graphics below that show what's currently in the news and what should be presented (or at least used for public health and health planning.)



## Get Outlook for iOS

**From:** Caneva, Duane  
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**Subject:** RE: Red Dawn Raging Start March 4

The Healthcare Sector private/ public partners  
need to organize in a national health reliability  
organization structure unhindered by  
government bureaucracy.

**Change my mind.**

**NHRO fiddled while Rome burned...**

*Hurricane Irma was one of the costliest hurricanes in U.S. history at nearly \$50 Billion in damages. It hit the Florida Keys heading north on September 10, 2017, heading up Florida's western coast, leaving Florida as a Tropical Storm and entering Georgia on September 11. In preparation for the storm, the Energy Sector pre-staged response resources near the state but outside the projected path of the storm. Governor Rick Scott quickly declared a state of emergency authorizing Energy Sector workers from outside of Florida to support response operations, and within 3 days of Irma leaving Florida, over 60,000 Linesman technicians from 48 states and Canada entered Florida to repair the damaged power lines and restore electricity to about 6.5 million customers who had lost power. All were licensed professionals under the management of the private sector coordinating with Florida and FEMA for the hurricane response. Their wages were paid by Florida Power and Lights Company, those costs covered by a hurricane insurance policy paid for by its customers as*

*part of their rates.*

*The National Disaster Medical System used up the last of its 4000 responders' deployment time. They were completely tapped out.*

## **II. Why a National Health Reliability Organization (NHRO)? The House of Medicine and the Need for Standards Development Processes**

We can look to the Energy Sector for instructive solutions driving reliability that may apply to the Health Sector. The Federal Power Act (FPA) of 2005 derived the authorities for the Federal Energy Reliability Commission (FERC) to have oversight of an Electric Reliability Organization (ERO), ultimately the National Electric Reliability Corporation (NERC), in its responsibilities to develop and enforce mandatory “reliability standards”. These standards impose requirements on users, owners, and operators of the bulk power system to ensure reliability of the power grid. Over \$1 Trillion in infrastructure owned and operated by over 3,500 utility organizations provides electricity to over 334 million customers.

The Energy Sector had its watershed moment with the Great Northeast Blackout of 1965 when a faulty setting of a protective relay on a high voltage transmission line in Ontario, Canada, failed. Over 30 million customers in the Northeast were without power for nearly 13 hours. In response to the blackout, voluntary reliability councils were established to investigate the causes and develop measures to reduce the likelihood of such events recurring. The NERC was established to provide a means for coordinating among interconnected utilities to ensure that the transmission network in the

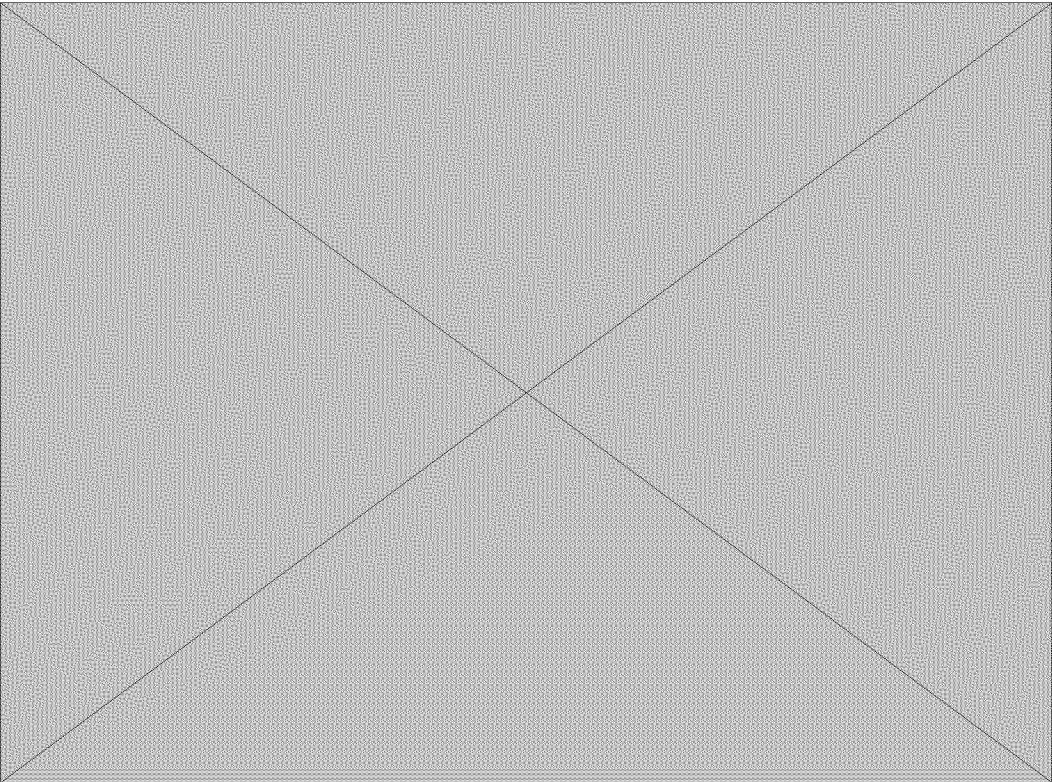
U.S. was reliable, adequate, and secure. In 1981, as the grid expanded to include sections of Canada and Mexico, the NERC changed from the *National* to the *North American* Electric Reliability Corporation with the same NERC acronym. On August 14, 2003, North America experienced its largest power blackout affecting 50 million customers extending across the Northeast into the Midwest. The cause was linked to “the 3 T’s” of power outages—trees, tools, and (lack of) training. As a result, Congress added Section 215 to the Federal Powers Act of 2005 that authorized the development of mandatory Reliability Standards by an independent electric reliability organization. This mandatory approach replaced the industry’s voluntary protocols and guidelines for operating and planning the bulk power system that had been in place since the 1960’s. While the NERC only covers bulk power generation and transmission, the regional councils broadened the membership to include all segments of the electric industry bulk power supply.

While NERC reliability standards do not cover the local, lowered voltage distribution of electricity--the power lines most often affected from storms--the industry as a whole has extended the reliability culture to the end customer through the NERC governance process that includes public stakeholders (i.e., customers) in the review of nearly all standards. Many corporations operate in bulk generation, transmission, *and* distribution, so are incentivized to “keep the lights on”. Within the industry, “coopetition” thrives because of the interdependencies, and the need for mutual aid and assistance that is frequently needed. And, at the end of the day, the industry is required to be reliable—keep the power on, and keep it affordable.

In the Health Sector, the same risks of cascading effects exist in the form of public health emergencies. The Sector is decentralized with limited, traditional, ineffective standards development processes and a splintered organizational structure. Associations,

academies, and societies are formed by medical guilds to ensure specialty voices are heard; however, very little signal rises above the noise unless done so through adversity, crisis, or sensationalism. Contagious diseases, poorly established practices, defective devices, or dangerous treatments can impact the end customers, but the Sector lacks the infrastructure or mechanisms to measure and recognize adverse outcomes rapidly and effectively. The private sector is essentially disconnected from government coordination except through limited, tenuous paths, including licensing at the state level, and reimbursement rates by the Center for Medicare and Medicaid Services (CMS) driving standards and pricing. The “House of Medicine”, \$3.5 Trillion of annual economic activity in the U.S., is not merely a house divided, it is a house in splinters. So, what would a “Health Reliability Organization” look like in our health sector?

Figure 1. A National Health Reliability Organization (NRHO) for the House of Medicine, \$ 3.5T of economic activity.



**This ICE is Cool...**

*Amir Patel is a patient recovering from 4 vessel coronary artery bypass graft (CABG) surgery in a small, private hospital in Calcutta, India. Under the watchful eyes of his intensive care unit nurses, he has no less than 12 medical devices monitoring or treating his condition, including a pulsox to monitor his oxygen levels, an end-tidal CO2 monitor, an ECG monitoring his heart rate and tracing, several IV infusion pumps giving him IV fluids and medicines, and a blood pressure cuff cycling every 10 minutes to measure his blood pressure. Each device operates independently from the other with alarms programmed to trigger should that device detect some abnormal level of function. All of the data from these devices is being captured and recorded in an Integrated Clinical Environment (ICE) device—an “ICE Box”. It is a large amount of data that, under normal circumstances will never make it to Amir’s electronic health record. But today, unfortunately, this will not be a normal outcome. One of Amir’s graft sutures to a vessel supplying blood to his heart has failed, and the vessel is leaking. Though several of the devices are registering significant, detectable changes consistent with this blood loss and the loss of blood supply to his heart, none are reaching a threshold level to alarm. By the time one of them alarms, and the nurse responds, and the surgeon is consulted, and they investigate and identify the cause of the alarm, Amir has lost too much blood to his heart and suffers a fatal cardiac arrest. While this is a known complication and risk of these surgeries, his surgeon is not satisfied.*

*This surgeon, a renowned cardiac surgeon who practiced in the United States for decades before “retiring” and opening this specialty hospital in India, provides these surgeries to patients for a flat fee of \$ 600. The patients would otherwise have no hope of affording it elsewhere. His hospital is extremely efficient, utilizing a systems operations engineered approach to optimize the process. He is also working with a research project from the U.S. to integrate the data from the multiple medical devices into the ICE Box. On analyzing the output from Amir’s case, he is able to identify a pattern of changes captured by several of the medical devices that demonstrated a predictable pattern expected with this type of complication. This pattern begins to emerge nearly 30 minutes before any single device alarms, and it is fairly*

*specific for the injury type. Applying this pattern to all the patients in his care, he now has a more sensitive indicator for an adverse outcome that is also specific to the type of complication that is occurring. It can be applied as an “algorithm” looking across the entire enterprise to identify complications earlier to the benefit of all patients being monitored and improving the quality of care. It is likely additional devices could add sensitivity or specificity to the predictive strength. It’s also likely there are patterns that identify other complications, that they can be further refined for sensitivity and specificity— cool, always improving apps for the ICE Box.*

*But where do these algorithms or apps get submitted? How are they validated? Who controls the “library” or registry for other such algorithm? Is this intellectual property? Is there a marketplace for these discoveries? Who controls what goes on the shelves in the ICE Box?*

### **III. National Health Reliability Organization Systems Architecture**

The rate of technology advancements across the various sectors of society continues its exponential climb. The balance between regulatory oversight and free, unfettered development and innovation must be managed through a deliberate, intentional, systematic process. Public-private partnerships play a role, as do development of consensus based industry standards. Title XII of Energy Policy Act of 2005 added Section 215 to the Federal Powers Act that authorized the Federal Energy Regulatory Commission (FERC) to certify an independent electric reliability organization to develop and enforce mandatory Reliability Standards. This empowered the private sector to self-enforce compliance of its industry standards. If and how this could be applied in the Health Sector requires much further, careful consideration. It requires the collection of data to analyze and validate outcomes. It introduces new drivers for the sector that seek to optimize

operations, improve efficiency, and incorporate improvements system wide that are evidence-based. It requires new tools and disciplines to find these efficiencies, identify risk, improving quality while reducing costs.

**A. Basic Organizing Principles Applied to the National Healthcare Reliability Organization (NHRO)**

**Guiding Principles (Harvard Leadership Course)**

- Unity of Effort
- Generosity of spirit and action
- Stay in one's lane and assist others to succeed in theirs
- No ego, no blame
- A foundation of trusting relationships

**Structural Principles**

- **Map the Systems Architecture**  
**Out:** Enterprise Architecture with Agile Taxonomy (Folksonomy) and Ontology that captures the Engineered, Systems of Systems of the sector
- **Determine the Business Rules:** Business Process Management with structured Rules of Engagement



- **Use a Common Enterprise Knowledge Management System:** Keep data authoritative and relational, Web 2.0, 3.0 enabled.

- **Measure the Performance:** Outcomes, Cost, Efficiency, Effectiveness, Risk Analysis, Process Improvement, Learning

## **B. National Health Regulatory Oversight and Governance (NHROG)**

- The NHROG authority would be empowered under a National Healthcare Reliability Act
- Would focus primarily on *oversight* of the development, implementation, enforcement, and validation processes of "healthcare reliability standards" developed by the National Health Reliability Organization (NHRO).
  - Ensure the stakeholders in the Health Sector fulfill their responsibilities in providing reliability of the Health Sector—quality, affordability, and accessibility.
  - Health reliability standards impose requirements on stakeholders in the Health Sector that address beyond day to day "blue sky" operations to include preparedness for and response to “black sky days”—risks identified through Health Sector threat and hazard identification risk assessments (THIRA) and individual hazard and vulnerability assessments at the local, state, and regional level.

## **C. Proposed Federal Executive Oversight Council**

Staffs of these offices support process, projects, and proposals. If the commission lacks sufficient

regulatory power, the HHS components would need to be considered to be given additional regulatory oversight investigation, and auditing authorities to ensure that industries and organizations do not pose threats to public safety or well-being.

- White House: National Economic Council (1), Domestic Policy Council (1), National Security Council (1)

- HHS (9): ASPR, ASH, FDA, NIH, NIAID, CDC, CMS, SG, ONCHIE

- DOD (2): ASDHA, TMA

- VHA

- DHS: CMO

- USDA

- DOC (NIST)

- DOJ

- State (MED)

- Ad hoc participants: National Center for Medical Intelligence (NCMI), DOJ/ FBI, DOL (OSHA), EPA, ODNI, NCTC, DOD Branch Surgeons General, Regional Combatant Commanders Command Surgeons

• **State/ Tribal/ Territorial Health Regulatory Oversight Authorities**

- State Public Health organizations and agencies

- Quarantine

- Professional licensing and monitoring authorities

- Emergency waiver process during disasters
- EMACs
- Prescription Monitoring
- Biohazardous Waste Handling and Transport
- EMS Systems
- County and City Health Departments

#### **D. National Health Reliability Organization (NHRO):**

- Mission: Ensure the reliability of healthcare sector to the American public with the triple aim of quality, affordability, and accessibility. This includes during response to predictable disasters.
- Vision: A national healthcare sector that unleashes the innovation and compassion of the American people working in the free-market economy to provide reliable healthcare to the nation.
- Purpose: Provide the Healthcare sector a structure for self-governance to provide reliability--quality healthcare that is affordable and accessible. The NHRO is answerable to oversight for standards development, implementation, compliance, and validation.
- Goals:
  - Ensure a reliable, resilient Health Sector able to meet the healthcare needs of the nation even under extreme conditions or circumstances
  - Drive innovation in healthcare to reduce costs, gain efficiencies, and improve individual

and national health and wellness,

- Recruit the next generation of researchers and healthcare providers that continue to innovate and provide compassionate, reliable healthcare.

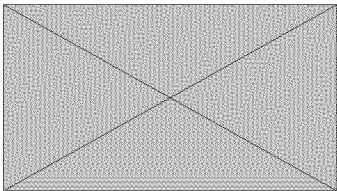
- Includes Private Sector Organizations, Associations in membership

- **The Regional Disaster Healthcare Response System (RDHRS)** is the preparedness model of the nation’s Healthcare System: Hospital or cluster of hospitals covering a defined catchment area that is integrated with community level critical sector partners including public works, public safety, energy, transportation, logistics, and all of the Medicare and Medicaid Participating Providers and Suppliers

- Example from the Energy Sector: "North American Electric Reliability Corporation (NERC)"

**NHRO Lead Council**

- Chairman elected by Member Voters
- Executive Committee composed of NHRO Committee.



- Answers to the NHROG

- Reports to the Administration, Congress, Members, Customers

- Coordinates with Health Sector Coordinating Council (SCC)/ Government Coordinating Council (GCC)

- Administrative Support Staff (n=100's)
- Chartered with corporate governance processes, most work and output is done virtually.
- Public and External (inter-sector) Affairs

### **Admin Support Staff and the Gateway**

- Gateway into the NHRO Environment
- Administrative support staff (n=100's) connected via the Portal Enterprise who manage the activities behind the scenes
- Help Desk for issues, topics, projects
- Virtual Emergency Operations Center, Incident management capability
- Information Sharing Analysis Center (ISAC)

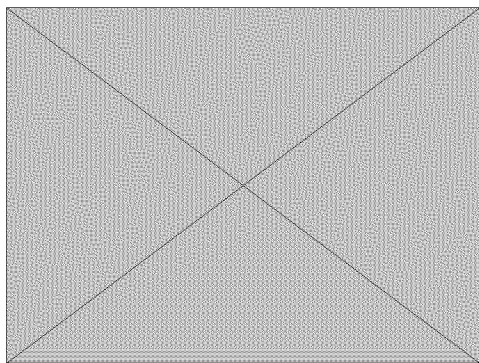
### **Members (Partners?)**

- Any organization engaged in meaningful aspects of healthcare or public health in the United States
  - Obligation to keep healthcare reliable–affordable, accessible, of good quality
  - Based on Mission, Purpose, Objectives, Activities
- Associations, Organizations, Professional Societies, Corporations, Hospitals

- All Members are characterized and "tagged" with specific traits for matching to "Alliances": Committees, Sub-committees, issues and projects

- Functional Mission and Purpose
- THIRA Risks
- The 10 Dimensions of National and Homeland Security Framework
- Financial (e.g., revenues, Profit/ non-profit)

## **Voters (Members?)**



- Voters are members or employees of the Associations, Organizations, Hospitals, Corporations
- Voters retain one vote for each organization that they participate in that is a member of the NHRC.
- For hospitals and CMS Participating Providers and Suppliers, this includes staff members that are credentialed and privileged
- Note that many federal workers are voters through their professional associations
- Excludes unions

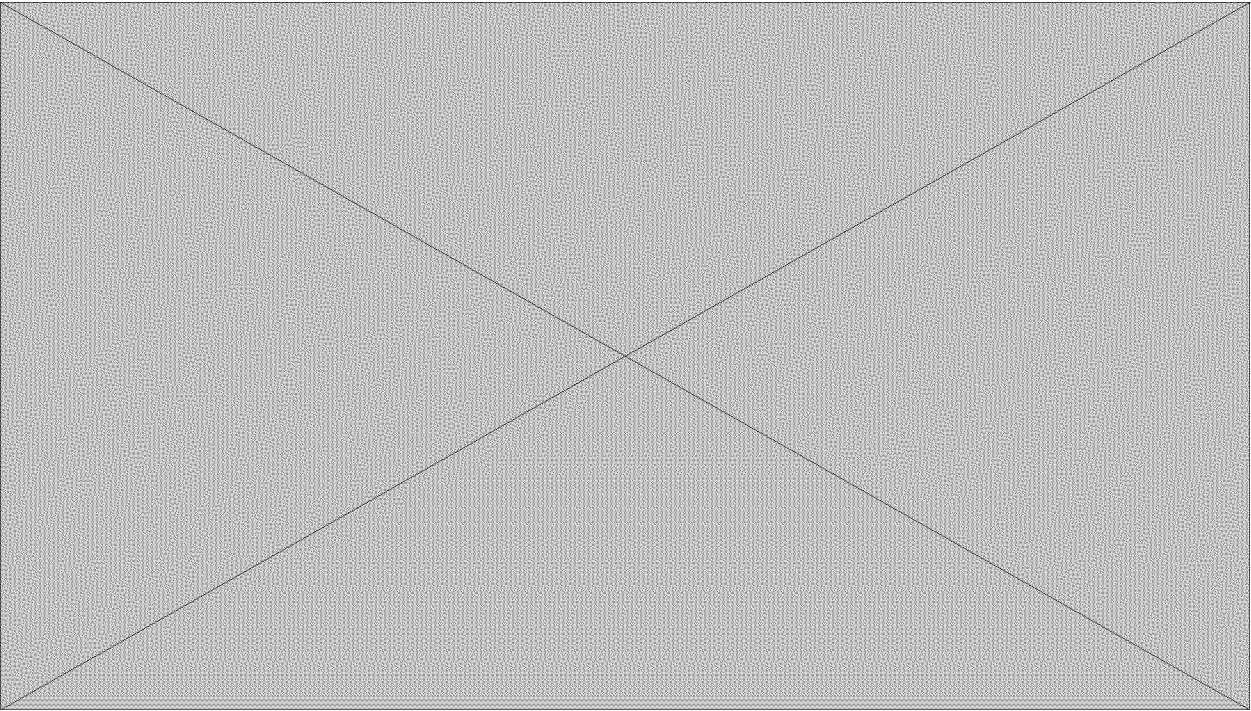
## Committees and Subcommittees

Committees mirror the oversight within the Federal departments and agencies for ONE Health and the components contributing to healthcare and public health.

- They further define oversight to streamline process, clarify roles, responsibilities, and authorities, and facilitate coordination across the sector and public private partnership (FHRC/ NHRC)
- Chairman of Committees sit on the NHRC Executive Committee
- Sub-committees may be formed to account for greater specificity of effort.
- Alliances, issues, and projects may work across committees and sub-committees
- Committees/ sub-committees may want to include separate but linked issues/ projects that are closely related but look for different outcomes through the Forum.
- Committees are topic based and address issues that are interdependent. They use a matrixed approach to work issues and projects.
- Healthcare Coalitions and Systems
- Outcomes, Performance, and Learning
- Biosafety and Ethics
- Workforce
- Education, Training, Certifications

- Recruitment, Suitability, Career Progression
- Professional Ethics Compliance
- Implementation
- Compliance and Enforcement
- Global Health Security
- Food Safety and Security
- Drug Safety, Security, and Utilization
- Science and Technology Advancement
- Artificial Intelligence (AI) and Patient Interface
- Diagnostics
- Therapeutics
- Advanced Vaccine Development
- Healthcare Economics
- Biodefense and National Security
- Preparedness and Response to All Hazards
- Health Information Technology and Data Exchanges





**Figure 2. Standards Setting Organization  
Function for the National Health Reliability  
Organization (NHRO)**

**E. Standards Development Process,  
Alliances, and Working Groups**

Alliances are determined by Issues or Projects, using members’ characterizations to identify who should participate.

- Requires a very detailed taxonomy and ontology of the healthcare system
- Relevance determines "mandatory" participants and "ad hoc".
  - Measurements and weighting factors identify significance of elements and their links and attachments to other elements to identify relevance for prioritization of attention and action level
  - Thresholds identify triggers and warning

signaling or flags for attention to issues identified

- Weighting factors employ fuzzy logic to capture various factors impacting relevance

- Comprehensive PowerPoint Presentation

- Relationships

- The system uses algorithms and smart humans using search to seek out common functions, objectives, activities, tasks, roles, responsibilities, authorities that indicate synergies that should be matched, aligned, collaborative, or may offer ready-made solutions.

- "Match.gov"-like capability

- Seeks to avoid redundant work, leverage good work already done, allow for crowd-sourcing issues for solutions.

- Breaks through silos.

- Interoperability, Dependency, Interdependency, Collaboration, Coordination

- Personal relationships are promoted via gamification and use of avatars highlighting characteristics of users and leveraging the diversity of skill sets, talents, and experience, and characteristics

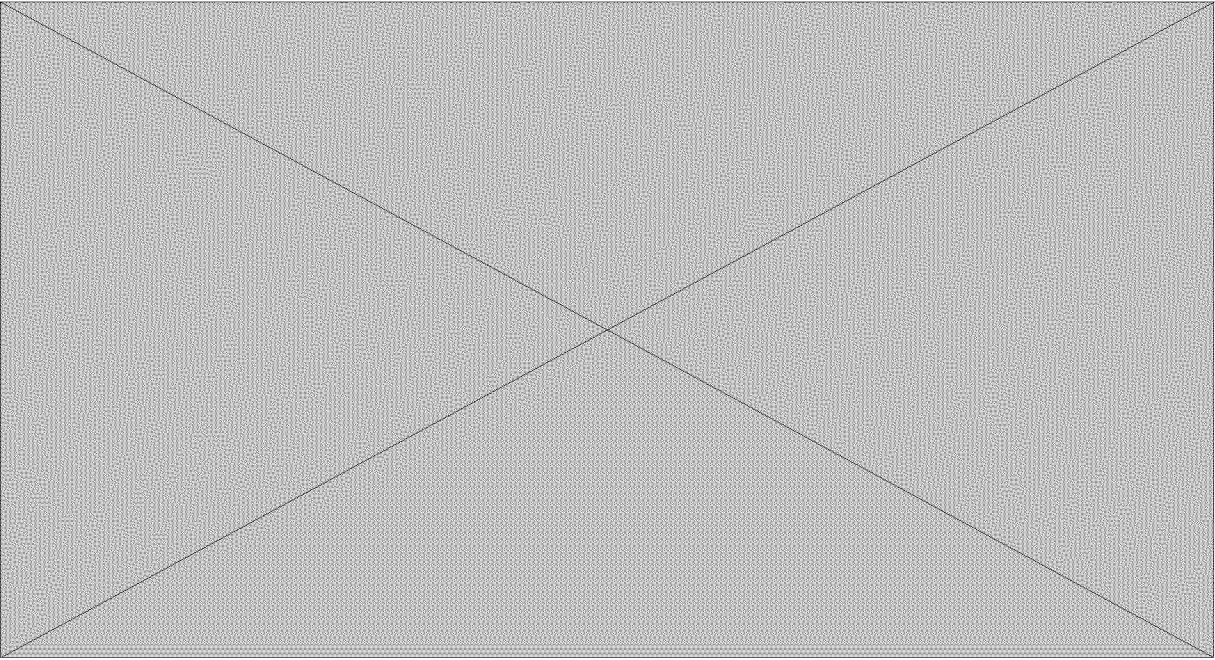
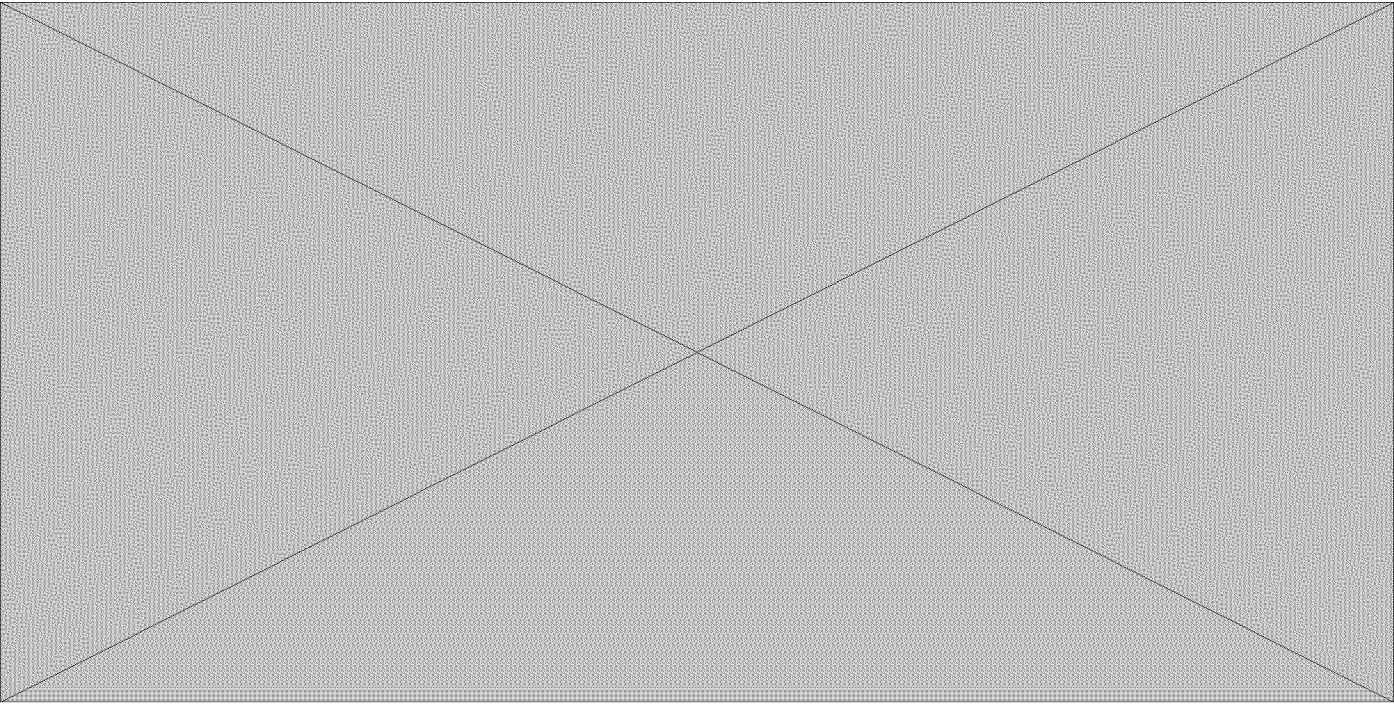
- Build great teams that express the diversity of personalities in the dramedy of the workplace

- Mandatory participants are those with "skin in the game", primary expertise or operational relevance to the issue (including secondary relevance).

- Operational Filters: Need to find all those with primary, secondary, tertiary interdependencies to consider the solutions

- The systems are complex, non-linear, and dynamic over time
- Solutions must be crowd-sourced (not group-think) to find single points of failure
- The NHRC must measure outcomes across all healthcare coalitions to pick up indicators and warnings of failure points
- Operational mandates: The sector must account for beyond the daily routine missions and be able to conduct operational response that is unified with FSLTT government efforts.
- Solutions may also need to be customized to account for variables specific to or that have greater impact on different parts of the system.
- For example, power outage requirements for air-conditioning in hospitals or nursing homes in the South during summer or heat in the North during winter.

**Figure 3. diagram displays the process for developing topical committees, multi-disciplinary representation, and standards development structure.**



F

**Figure 4 displays the sub-components of main topics, broken down further to critical sub-topics**

**F. Health Information Data Exchanges**

Health Information Data Exchanges (HIDE) represent a new, emergent sub-sector

- A cottage industry allowing for secure, private sharing of data and information to optimize the healthcare provided nationwide
- Data has intrinsic and extrinsic value. Big data has big value. Trash or treasure, who can use the data?
- Data sharing/ brokerages in support of the NHRC.
- Another analogous system is the National Weather Service--billions of dollars invested in weather stations, satellite systems, and computational science now allows very accurate characterization, forecasting, and prediction of local weather patterns and national impact.
- Internet of Things (IoT) will collect data. The integration of data layers will need to be explored to find meaningful information (improving quality, decreasing cost, increasing access to healthcare).
- Should be a part of the publication of medical journals consolidated into libraries (see "The Academy" below).
- Actuarial versus statistical data outcomes that include additional data layers (demographics, geo-spatial locations, time, geography...)
- Algorithms for search, treatment, research, surveillance,
- Registries (virtual and active) for disease processes, treatments, etc..

## **G. The Forum**

The Forum captures the business process "Rules of the Road" for addressing issues and projects using PNP Project Management Principles

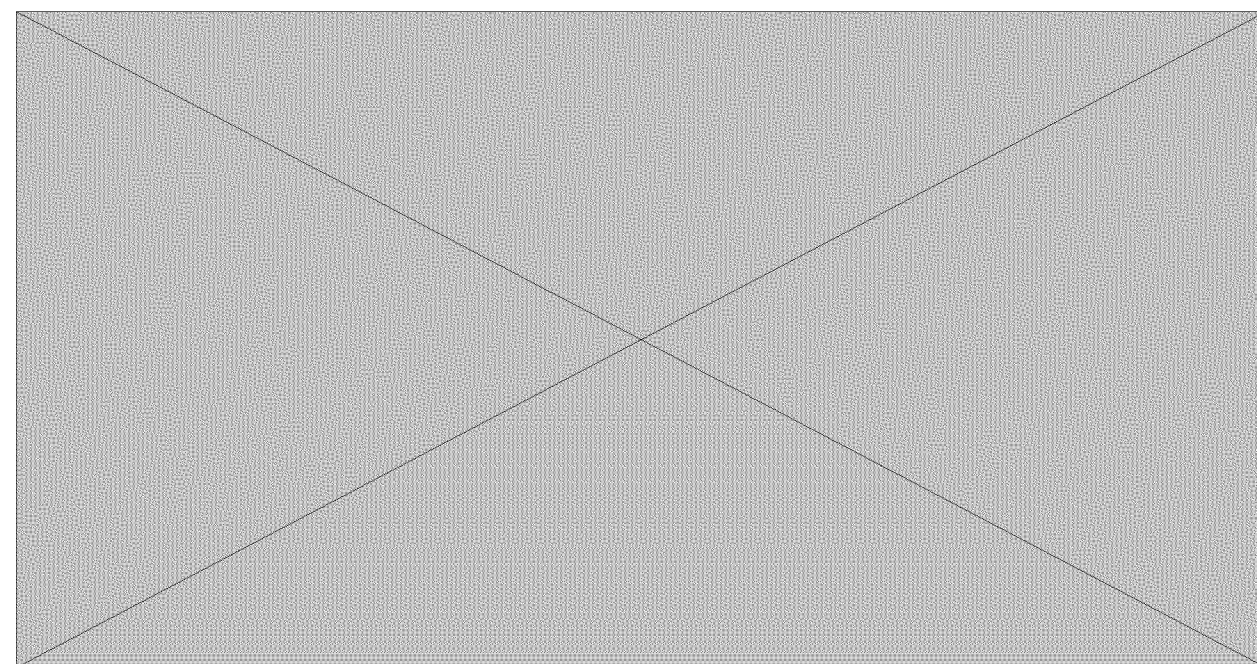
- Wiki collaboration capturing authoritative, relational data in netcentric operations style with smart push, pull
- Provides situational awareness and is transparent to the public
- Has an associated healthcare information/ data exchange for capturing and measuring outcomes
- Issues/ Projects can be specific to national, regional, state, county, community, healthcare coalition
- Captures progression of projects/ issues through 8 phases
  - Deconstruction: Identifying the issue in detail to irreducible complexity including manpower, organizational structure, requirements, equipment, training, exercises, assessments, maintenance (annual costs), sustainment (outyear costs)

It should all use a standard format that forces the details to be determined up front. This makes assessment and outcome metrics determination easier (or possible) later on.

- Assimilation: identifying relevant members to form the sub-committee (alliance) and bring them together to work the issue/ project
- Construction:
- Adjudication
- Implementation
- Assessment
- Analysis

- Outcomes Reporting and Standards Development

- Output is a "Standard", "Practice", or appropriately titled solution that is presented back to the appropriate subcommittee/committee for review and approval, then sent to the appropriate regulatory entity for review.
- Compliance: Ensures objectives of the project are being met and are aligned with Healthcare Reliability Standards



**Figure 5 displays the Forum process for Project Management and Workflow for development, implementation, and validation of standards, best practices, guidelines.**

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**From:** [cmecher@charter.net](mailto:cmecher@charter.net)

---

Sent: Friday, March 13, 2020 9:03 AM

To: \_\_\_\_\_

Cc: **Subject:** Re: Red Dawn Raging Start  
March 4

**CAUTION:** This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. Contact your component SOC with questions or concerns.

Virginia is developing its own coronavirus tests, and urged public schools to make their own decisions on whether to cancel classes. Loudoun County Public Schools will be closed through next week. Fairfax County, the region’s largest school system, announced late Thursday that it would be closed Friday and was cancelling after-school activities and field trips through April 12; Fairfax schools were already slated to be closed Monday so staff could prepare to teach classes online if necessary.

-----

From: [cmecher@charter.net](mailto:cmecher@charter.net)

To: \_\_\_\_\_

Cc: "Dr Eva Lee", James V", "Dr. Eva K Lee",  
"CHRISTOPHER ALLEN",  
"Tom Bossert",  
Gerald W", "Richard Hatchett",David (DSHS)",  
Eric", Luciana", "Brian Benson", "Tracey  
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THOMAS", "M.D.", "David", "Charity  
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(OS/ASPR/SPPR)", "Matthew J CIV USARMY



(USA)", "Lisa Koonin", MELISSA",  
HERBERT", Alexander", MARIEFRED",  
"jwleduc@utmb.edu", Robert  
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Monique K.", Jessica (USDA.GOV)", "DC",  
"dannyschau@usuhs.edu", Jerome (CTR)", Jay  
J", Joselito", "Will Gaskins", "Kevin  
Montgomery", Linda L", "LLogandakar",  
"rajeev.venkayya@takeda.com"

Sent: Friday March 13 2020 7:10:30AM

Subject: Re: Red Dawn Raging Start March 4

+Rajeev

-----  
From: [cmecher@charter.net](mailto:cmecher@charter.net)

To: \_\_\_\_\_

Cc: "Dr. Eva Lee", James V", "Dr. Eva K Lee",  
"CHRISTOPHER ALLEN",  
"Tom Bossert",  
Gerald W", "Richard Hatchett",David (DSHS)",  
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David (Chris) (OS/ASPR/IO)", Joseph

(OS/ASPR/IO)", Dan", David", DAVID A", SANGEETA", Scott (OS/ASPR/EMMO)", "Larry G", "Ryan Morhard", "Steven Jt(tCHFStDPH )", Jerome (HHS/OASH)", Monique K.", Jessica (USDA.GOV)", "DC", "[danny.shiau@usuhs.edu](mailto:danny.shiau@usuhs.edu)", Jerome (CTR)", Jay J", Joselito", "Will Gaskins", "Kevin Montgomery", Linda L", "LLogandakar"

Sent: Friday March 13 2020 7:09:26AM

Subject: Re: Red Dawn Raging Start March 4

This is what leadership looks like.

*“We whole-heartedly endorse the bold and decisive decisions of our Governor here today. This is not about a healthcare system; this is about all of us. We can all fight back against this virus, and in fact, we need to. The health care system can treat those who are ill; and across all of Maryland, we’re readying ourselves in case we need to. However, by putting aggressive steps in place that the Governor just outlined with regard to social distancing, closures of schools, teleworking – these are steps we can all adopt...the earlier we do this, the more layers we put in place, the less this virus can be transmitted. That’s the key.”* Dr. Marcozzi, at a press conference hosted by Governor Larry Hogan announcing major steps in the state of Maryland’s COVID-19 response. Those steps included

- Maryland Emergency Management Agency increase activation to highest level
- Activate national guard
- All state government is raised to elevated level 2 - all non-essential employees who can telework required to do so
- Public access to state buildings restricted
- **No gatherings of more than 250+**

**people** (including sports and religious gatherings)

- All senior centers closed
- All state and local government buildings with more than 250+ people must follow social distancing
- Close cruise ship terminal in Baltimore
- Extension of expiration dates on permits including drivers licenses, license plates, professional licenses, until 30 days after end of state of emergency
- All hospitals adopt new visitor policies to stop spread of COVID-19
- All prisons will suspend visits

○ All non-essential functions of government are now managed by Lt Gov Rutherford so Gov Hogan can focus solely on COVID-19

○ **Monday, March 16 through Friday, March 27 - all public schools closed**

- Measures taken to provide child care for essential workers/first responders

From: [cmecher@charter.net](mailto:cmecher@charter.net)

To: "Dr. Eva Lee"

Cc: James V", "Dr. Eva K Lee",  
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Monique K.", Jessica (USDA.GOV)", "DC",  
"danny.shiau@usuhs.edu", Jerome (CTR)", Jay  
J", Joselito", "Will Gaskins", "Kevin  
Montgomery", Linda L", "LLogandakar"

Sent: Thursday March 12 2020 10:30:31PM

Subject: Re: Red Dawn Raging Start March 4

<https://www.chicagotribune.com/coronavirus/ct-nw-coronavirus-united-states-school-closings-20200312-sh2d5vi525drvcf5dwm7hnebru-story.html>

Here is the list of states now closing schools.  
Add Kentucky too. Illinois had a press briefing  
and they are getting ready.

Getting close to the tipping point.

-----

From: "Dr. Eva Lee"

To: James V"

Cc: "Dr. Eva K Lee",  
"CHRISTOPHER ALLEN",  
"Tom Bossert",  
Gerald W", "Richard Hatchett",David (DSHS)",  
Eric", Luciana", "Brian Benson", "Tracey  
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"danny.shiau@usuhseu", Jerome (CTR)", Jay  
J", Joselito", "Will Gaskins", "Kevin  
Montgomery", Linda L", "LLogandakar"

Sent: Thursday March 12 2020 9:45:09PM

Subject: Re: Red Dawn Raging Start March 4

This is great. WA is not quite fully, just partial.  
MA, CA, and NY should act immediately. They  
have big fire to fight.

Grocery store is very long line now (in Atlanta)!  
And shelves are very empty. Oh dear!

On Thu, Mar 12, 2020 at 9:14 PM Lawler,  
James V <james.lawler@unmc.edu> wrote:

NE has its finger on the trigger. We will pull  
(regionally) as soon as we hit our threshold. Full  
NPI. We have great state leadership on this.

James Lawler, MD, MPH, FIDSA

Director, International Programs & Innovation

Global Center for Health Security, and

Associate Professor of Medicine

Division of Infectious Diseases

University of Nebraska Medical Center

m:

[james.lawler@unmc.edu](mailto:james.lawler@unmc.edu)

-----

**From:** \_\_\_\_\_

**Sent:** Friday, March 13, 2020 4:00:38 AM

**To:** \_\_\_\_\_

**Cc:** 'Dr. Eva K Lee'  
'CHRISTOPHER ALLEN'

'Dr. Eva Lee'

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'EVANS, MARIEFRED'  
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<kevin.yeskey@hhs.gov>; 'Disbrow, Gary  
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<Gary.Disbrow@hhs.gov>; 'Redd, John  
(OS/ASPR/SPPR)' <John.Redd@hhs.gov>;  
'Hassell, David (Chris) (OS/ASPR/IO)'  
<David.Hassell@hhs.gov>; 'Hamel, Joseph  
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<will.gaskins@efia.com>; 'Kevin Montgomery'  
<kevin@collaborate.org>; 'Logan, Linda L'  
<llogan@cvm.tamu.edu>; 'LLogandakar'

**Subject:** RE: Red Dawn Raging Start March 4

Non-UNMC email

Pennsylvania Governor Wolf closes all schools,  
community centers, gyms, and entertainment  
venues in Montgomery County due to  
coronavirus - WPVI

Houston Independent School District, one of the  
largest in the U.S., closes all schools until March  
30 due to coronavirus

So now we have: (1) MD; (2) OH; (3) GA; (4)  
PA; (5) TX

-----

From: [cmecher@charter.net](mailto:cmecher@charter.net)

To: "Dr. Eva K Lee"

Cc: "CHRISTOPHER ALLEN", "Dr. Eva Lee",  
James V", "Tom  
Bossert", Gerald W", "Richard Hatchett", David



(DSHS)", Eric", Luciana", "Brian Benson",  
"Tracey McNamara", "Duane Caneva", Ralph  
S", Carter ([VA.GOV](#))", Richard  
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"danny.shiau@usuhs.edu", Jerome (CTR)", Jay  
J", Joselito", "Will Gaskins", "Kevin  
Montgomery", Linda L", "LLogandakar"

Sent: Thursday March 12 2020 5:34:21PM

Subject: RE: Red Dawn Raging Start March 4

Georgia schools are closing now--Cobb County,  
Fulton County, Atlanta Public Schools (those  
are the big ones). I reached out to the  
superintendent early today and government  
leaders.

-----

From: "Dr. Eva K Lee"

To: "Carter Mecher"

Cc: "CHRISTOPHER ALLEN", "Dr. Eva Lee",  
James V", "Tom  
Bossert", Gerald W", "Richard Hatchett",David  
(DSHS)", Eric", Luciana", "Brian Benson",  
"Tracey McNamara", "Duane Caneva", Ralph  
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(OS/ASPR/EMMO)", THOMAS", "M.D.",

"David", "Charity A@CDPH", "Gregory J",  
William ([STATE.GOV](http://STATE.GOV)), CAMERON",

),"Kristin (OS/ASPR/SPPR)", Sally  
(OS/ASPR/SPPR)", "Matthew J CIV USARMY  
(USA)", "Lisa Koonin", MELISSA",  
HERBERT", Alexander", MARIEFRED",  
"jwleduc@utmb.edu", Robert  
(OS/ASPR/BARDA)", Kevin", Gary  
(OS/ASPR/BARDA)", John (OS/ASPR/SPPR)",  
David (Chris) (OS/ASPR/IO)", Joseph  
(OS/ASPR/IO)", Dan", David", DAVID A",  
SANGEETA", Scott (OS/ASPR/EMMO)",  
"Larry G", "Ryan Morhard", "Steven  
Jt(tCHFStDPH )", Jerome (HHS/OASH)",  
Monique K.", Jessica ([USDA.GOV](http://USDA.GOV))", "DC",  
"danny.shiau@usuhs.edu", Jerome (CTR)", Jay  
J", Joselito", "Will Gaskins", "Kevin  
Montgomery", Linda L", "LLogandakar"

Sent: Thursday March 12 2020 4:43:02PM

Subject: RE: Red Dawn Raging Start March 4

Great, even though it is one step at a time. By the way, I have discovered something uniformly true across all sites -- when we saw the first case, we're exactly 2 weeks behind the disease spread already. It is very interesting. Hence I told David Marcozzi that a single case as a trigger is a good trigger, because that's when you know there're already many "unknown" ones circulating in the community. I saw the patterns now on many cites I think I made that statement already for quite many weeks. But it is interesting to see how beautiful those numbers line up. Oh, I just got off the phone with the Washington Post reporter. She wanted to talk to me a few days ago. Finally she got hold of me. I made a point that it is not one piecemeal action at a time. NPI (schools, workers, worships, events, etc) must be rolled out now so that we can put a brake on and benefit from the full effect. Otherwise, a little here and a little there won't make a dent. She asked me about politicians (who has read my models). I have no idea. Good that I have no head for that and I told her I would like her article to be factual and speak to the American people and also perhaps speak to the leaders too so they can all work together with one common goal -- beat the virus and stay ahead of it instead of chasing after it with little batches. Don't know

what she would write, but she seems quite interested in the work.

[[newton.isye.gatech.edu](https://newton.isyegatech.edu)]  
[[newton.isye.gatech.edu](https://newton.isyegatech.edu)]<https://newton.isyegatech.edu>  
[h.edu/DrLee/](https://newton.isyegatech.edu) [[newton.isye.gatech.edu](https://newton.isyegatech.edu)]

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On Thursday, March 12, 2020 4:17 PM, Carter Mecher \_\_\_\_\_ wrote:

Ohio closing schools.

**Ohio schools to close for 3 weeks during coronavirus ‘crisis;’ Gov. DeWine bans gatherings of more than 100 people**

Georgia not mandating but asking districts to consider.

There is no Rupert Blue among any of the Federal leaders. It must come from the states and the Governors.

Sent from Mail [go.microsoft.com] for Windows 10

**From:** CHRISTOPHER ALLEN

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**Sent:** Thursday, March 12, 2020 3:03 PM

**To:** [Carter Mecher](#); [Dr. Eva Lee](#); [Lawler, James V](#); \_\_\_\_\_

**Cc:** [Dr. Eva K Lee](#); [Tom Bossert](#); [Parker Jr, Gerald W](#); [Richard Hatchett](#); [Gruber,David \(DSHS\)](#); [McDonald, Eric](#); [Borio, Luciana](#); [Brian Benson](#); [Tracey McNamara](#); [Duane Caneva](#); [Baric, Ralph S](#); [Mecher, Carter \(VA.GOV\)](#); [Hunt, Richard \(OS/ASPR/EMMO\)](#); [WILKINSON, THOMAS; M.D.](#); [David; Charity A@CDPH](#); [Gregory J; Walters, William \(STATE.GOV\)](#); [HAMILTON, CAMERON](#); [Dodgen,tDanielt\(OS/ASPR/SPPR\)](#); [DeBord,Kristin \(OS/ASPR/SPPR\)](#); [Phillips, Sally \(OS/ASPR/SPPR\)](#); [Matthew J CIV USARMY \(USA\)](#); [Lisa Koonin](#); [HARVEY, MELISSA](#); [WOLFE, HERBERT](#); [Eastman, Alexander](#); [EVANS, MARIEFRED](#); [jwleduc@utmb.edu](#); [Johnson, Robert \(OS/ASPR/BARDA\)](#); [Yeskey, Kevin](#); [Disbrow, Gary \(OS/ASPR/BARDA\)](#); [Redd, John \(OS/ASPR/SPPR\)](#); [Hassell, David \(Chris\) \(OS/ASPR/IO\)](#); [Hamel, Joseph \(OS/ASPR/IO\)](#); [Hanfling, Dan](#); [Wade, David](#); [TARANTINO, DAVID A](#); [KAUSHIK, SANGEETA](#); [Lee, Scott \(OS/ASPR/EMMO\)](#); [Larry G](#); [Ryan Morhard](#); [Steven Jt\(tCHFStDPH \)](#); [Adams, Jerome \(HHS/OASH\)](#); [Mansoura, Monique K.](#); [Fantinato, Jessica \(USDA.GOV\)](#); [DC](#); [danny.shiau@usuhs.edu](#); [Cordts, Jerome \(CTR\)](#); [Schnitzer, Jay J](#); [Ignacio, Joselito](#); [Will Gaskins](#); [Kevin Montgomery](#); [Logan, Linda L](#); [LLogandakar](#)

**Subject:** Re: Red Dawn Raging Start  
March 4

Eva, Carter, James - All

Understanding that we are in the heat of the battle - wanted to share the attached with the thinking of equating the timing of response (federal/state/local) with economic cost. The ability to model trajectories based on the attached model or perhaps something similar might more fully inform the timing of response activities in order to strike a balance between responding to early vs. responding to late - pro-active data driven decision making vs. reactive.

This model was developed during H1N1 and derived from a variant similarly applied post 911 activities.

Best,

Chris Allen

Chief IT Officer (ret)

Department of Homeland Security

(m)

---

**From:** Carter Mecher

**Sent:** Thursday, March 12, 2020 2:28 PM

**To:** Dr. Eva Lee

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LLogandakar  
**Subject:** RE: Red Dawn Raging Start  
March 4

[[nejm.org](https://www.nejm.org)]  
[[nejm.org](https://www.nejm.org/doi/full/10.1056/NEJMc2003717?query=RP)]  
<https://www.nejm.org/doi/full/10.1056/NEJMc2003717?query=RP>  
[[nejm.org](https://www.nejm.org)]

Detection of Covid-19 in Children in Early  
January 2020 in Wuhan, China



This study showed that Covid-19 occurred in children, causing moderate-to-severe respiratory illness, in the early phase of the SARS-CoV-2 outbreak in Wuhan and was associated with ICU admission in one patient. None of the patients or their family members had had direct exposure to Huanan Seafood Wholesale Market (the initial location to which cases of Covid-19 were linked) or to one another. It is worth mentioning that we unexpectedly found a case of Covid-19 in one patient (Patient 3) who resided outside Wuhan; this patient had illness onset on January 2, 2020. The patient and her family were residents of the Yangxin area of Huangshi and had not traveled outside the city in the month before illness onset. We have not identified the source of infection for this patient. Our findings indicate that SARS-CoV-2 infections in children were occurring early in the epidemic.

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**From:** [Carter Mecher](#)

**Sent:** Thursday, March 12, 2020 1:53 PM

**To:** [Dr. Eva Lee](#); [Lawler, James V](#)

**Cc:** [Dr. Eva K Lee](#); [Tom Bossert](#); [Parker Jr, Gerald W](#); [Richard Hatchett](#); [Gruber, David \(DSHS\)](#); [McDonald, Eric](#); [Borio, Luciana](#); [Brian Benson](#); [Tracey McNamara](#); [Duane Caneva](#); [Baric, Ralph S](#); [Mecher, Carter \(VA.GOV\)](#); [Hunt, Richard \(OS/ASPR/EMMO\)](#); [WILKINSON, THOMAS; M.D.](#); [David; Charity A@CDPH](#); [Gregory J; Walters, William \(STATE.GOV\)](#); [HAMILTON, CAMERON](#); [rjglassjr@gmail.com](mailto:rjglassjr@gmail.com);

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Disbrow, Gary (OS/ASPR/BARDA);  
Redd, John (OS/ASPR/SPPR); Hassell,  
David (Chris) (OS/ASPR/IO); Hamel,  
Joseph (OS/ASPR/IO); Hanfling, Dan;  
Wade, David; TARANTINO, DAVID A;  
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Morhard; Steven Jt(tCHFStDPH );  
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Monique K.; Fantinato, Jessica  
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danny.shiau@usuhs.edu; Cordts, Jerome  
(CTR); Schnitzer, Jay J; Ignacio, Joselito;  
Will Gaskins; CHRISTOPHER ALLEN;  
Kevin Montgomery; Logan, Linda L;  
LLogandakar

**Subject:** RE: Red Dawn Raging Start  
March 4

On a different note, I realized we were sitting on top of some really useful data in terms hospital lengths of stay. I have been tracking hospital data on Hubei since the beginning. Each day Hubei provides the current number of patients in the hospital (hospital census) with a break down by condition (serious and critical). If I sum the daily hospital census, I have a count of total BDOCs. I can do that for all hospitalized patients and also those who are critical (assuming those represent ICU patients). For the hospitalized patients, I can divide the total BDOCs by the cumulative number of confirmed cases and estimate a hospital LOS (the average is 16 days). The ICU is a bit trickier. I assumed that 5% of the confirmed cases would require ICU care. So divide the total ICU BDOCs by the cumulative confirmed cases multiplied by 5%. The average ICU LOS is 16 days. See below.

Eva and Nathaniel, you might to use these numbers. These are probably the best numbers we can find.

|         | Hubei COVID-19           |              |                |
|---------|--------------------------|--------------|----------------|
| Date    | Total Current Inpatients | Mild Disease | Severe Disease |
| 1/14/20 | 6                        |              |                |
| 1/15/20 | 5                        |              |                |
| 1/16/20 | 5                        |              |                |

|         |     |     |  |
|---------|-----|-----|--|
|         |     |     |  |
| 1/17/20 | 8   |     |  |
| 1/18/20 | 136 | 100 |  |
| 1/19/20 | 170 | 126 |  |
| 1/20/20 | 239 | 176 |  |
| 1/21/20 |     |     |  |
| 1/22/20 | 399 | 304 |  |
| 1/23/20 | 494 | 365 |  |

|         |       |       |  |
|---------|-------|-------|--|
| 1/24/20 | 658   | 472   |  |
| 1/25/20 | 915   |       |  |
| 1/26/20 | 1,645 | 1,013 |  |
| 1/27/20 | 2,567 | 1,877 |  |
| 1/28/20 | 3,349 | 2,450 |  |
| 1/29/20 | 4,334 | 3,346 |  |
| 1/30/20 | 5,486 | 4,392 |  |

|         |        |        |  |
|---------|--------|--------|--|
| 1/31/20 | 6,738  | 5,444  |  |
| 2/1/20  | 8,565  | 7,003  |  |
| 2/2/20  | 9,618  | 7,917  |  |
| 2/3/20  | 10,990 | 8,857  |  |
| 2/4/20  | 12,627 | 10,107 |  |
| 2/5/20  | 14,314 | 11,230 |  |

|         |        |        |  |
|---------|--------|--------|--|
|         |        |        |  |
| 2/6/20  | 15,804 | 11,802 |  |
| 2/7/20  | 19,835 | 14,640 |  |
| 2/8/20  | 20,993 | 15,746 |  |
| 2/9/20  | 22,160 | 16,655 |  |
| 2/10/20 | 25,087 | 18,743 |  |

|         |        |        |  |
|---------|--------|--------|--|
|         |        |        |  |
| 2/11/20 | 26,121 | 18,880 |  |
| 2/12/20 | 33,693 | 26,609 |  |
| 2/13/20 | 36,719 | 27,081 |  |
| 2/14/20 | 38,107 | 27,955 |  |
| 2/15/20 | 39,447 | 29,051 |  |



|         |        |        |  |
|---------|--------|--------|--|
| 2/16/20 | 40,814 | 31,017 |  |
| 2/17/20 | 41,957 | 30,987 |  |
| 2/18/20 | 43,471 | 32,225 |  |
| 2/19/20 | 43,745 | 32,567 |  |
| 2/20/20 | 42,056 | 31,059 |  |
| 2/21/20 | 41,036 | 30,144 |  |

|         |        |        |  |
|---------|--------|--------|--|
|         |        |        |  |
| 2/22/20 | 40,127 | 29,429 |  |
| 2/23/20 | 39,073 | 29,643 |  |
| 2/24/20 | 37,896 | 29,221 |  |
| 2/25/20 | 36,242 | 27,916 |  |
| 2/26/20 | 34,978 | 26,994 |  |
| 2/27/20 | 32,878 | 25,245 |  |

|         |        |        |  |
|---------|--------|--------|--|
|         |        |        |  |
| 2/28/20 | 31,064 | 23,694 |  |
| 2/29/20 | 28,912 | 21,805 |  |
| 3/1/20  | 26,901 | 20,029 |  |
| 3/2/20  | 25,050 | 18,457 |  |
| 3/3/20  | 23,039 | 16,807 |  |

|        |        |        |  |
|--------|--------|--------|--|
| 3/4/20 | 20,765 | 14,977 |  |
| 3/5/20 | 19,758 | 14,170 |  |
| 3/6/20 | 18,518 | 13,159 |  |
| 3/7/20 | 17,078 | 11,938 |  |
| 3/8/20 | 15,826 | 10,835 |  |
| 3/9/20 | 14,957 | 10,256 |  |

|                |           |       |  |
|----------------|-----------|-------|--|
|                |           |       |  |
| 3/10/20        | 13,712    | 9,300 |  |
| 3/11/20        | 12,769    | 8,589 |  |
| Total<br>BDOCs | 1,103,287 |       |  |

LOS 16

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**From:** [Dr. Eva Lee](#)

**Sent:** Thursday, March 12, 2020 1:28 PM

**To:** Lawler, James V

**Cc:** Carter Mecher; Dr. Eva K Lee; Tom Bossert; Parker Jr, Gerald W; Richard Hatchett; Gruber, David (DSHS); McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Duane Caneva; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON; Dodgen, tDanielt(OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Hanfling, Dan; Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH ); Adams, Jerome (HHS/OASH); Mansoura, Monique K.; Fantinato, Jessica (USDA.GOV); DC; danny.shiau@usuhs.edu; Cordts, Jerome (CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; CHRISTOPHER ALLEN; Kevin Montgomery; Logan, Linda L; LLogandakar

**Subject:** Re: Red Dawn Raging Start March 4

Yes, very very sad -- it's all the planning and we must execute and we can't execute!

On Thu, Mar 12, 2020 at 1:22 PM Lawler, James V <[james.lawler@unmc.edu](mailto:james.lawler@unmc.edu)> wrote:

We are making every misstep leaders initially made in table-tops at the outset of pandemic planning in 2006. We had systematically addressed all of these and had a plan that would work – and has worked in Hong Kong/Singapore. We have thrown 15 years of institutional learning out the window and are making decisions based on intuition.

Pilots can tell you what happens when a crew makes decisions based on intuition rather than what their instruments are telling them

And we continue to push the stick forward...

**James Lawler, MD, MPH, FIDSA**

m:

[james.lawler@unmc.edu](mailto:james.lawler@unmc.edu)

**From:** Carter Mecher

**Date:** Thursday, March 12, 2020 at 8:08 PM

**To:** "Dr. Eva K Lee" <[evalee-](mailto:evalee-@unmc.edu)

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<DHanfling@iqт.орг>, "Wade, David"  
<david.wade@hq.dhs.gov>,  
"TARANTINO, DAVID A"  
<david.atarantino@cbp.dhs.gov>,  
"KAUSHIK, SANGEETA"  
<sangeeta.kaushik@hq.dhsgov>, "Lee,  
Scott (OS/ASPR/EMMO)"  
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<PadgetLG@state.gov>, Ryan Morhard  
<Ryan.Morhard@weforum.org>, "Steven  
Jt(tCHFStDPH )"  
<steven.stack@ky.gov>, "Adams, Jerome  
(HHS/OASH)"  
<Jerome.Adams@hhs.gov>, "Mansoura,  
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"Fantinato, Jessica (USDA.GOV  
[usda.gov])"  
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<michelle.colby@usda.gov>,  
"danny.shiau@usuhs.edu"  
<danny.shiau@usuhs.edu>, "Cordts,  
Jerome (CTR)"  
<jerome.cordts@associates.hq.dhs.gov>,  
"Schnitzer, Jay J" <jschnitzer@mitreorg>,  
"Ignacio, Joselito"  
<joselito.ignacio@fema.dhs.gov>, Will  
Gaskins <will.gaskins@efiia.com>,



CHRISTOPHER ALLEN

Kevin

Montgomery <[kevin@collaborate.org](mailto:kevin@collaborate.org)>,  
"Logan, Linda L"  
<[llogan@cvm.tamu.edu](mailto:llogan@cvm.tamu.edu)>, LLogandakar

**Subject:** RE: Red Dawn Raging Start  
March 4

Non-UNMC email

This coming Saturday will mark two weeks since the first death in the US. On Saturday (likely by then we will have ~2,500 cases and 75 deaths given the current trajectory), ask yourself, what do you wish we would have done 2 weeks earlier on Feb 29? I don't think shutting down travel with Europe would have made the list. If you can answer that question truthfully now, then what are we waiting for?

Sent from [Mail \[go.microsoft.com\]](#) for Windows 10

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**From:** [Dr. Eva K Lee](#)

**Sent:** Thursday, March 12, 2020 12:54 PM

**To:** [Carter Mecher](#)

**Cc:** [Lawler, James V](#); [Tom Bossert](#); [Parker Jr, Gerald W](#); [Richard Hatchett](#); [Gruber,David \(DSHS\)](#); [Dr. Eva Lee](#); [McDonald, Eric](#); [Borio, Luciana](#); [Brian Benson](#); [Tracey McNamara](#); [Duane Caneva](#); [Baric, Ralph S](#); [Mecher, Carter \(VA.GOV\)](#); [Hunt, Richard \(OS/ASPR/EMMO\)](#); [WILKINSON, THOMAS; M.D.](#); [David](#); [Charity](#)

---

A@CDPH; Gregory J; Walters, William  
(STATE.GOV); HAMILTON,  
CAMERON;  
Dodgen,tDanielt(OS/ASPR/SPPR);  
DeBord,Kristin (OS/ASPR/SPPR);  
Phillips, Sally (OS/ASPR/SPPR);  
Matthew J CIV USARMY (USA); Lisa  
Koonin; HARVEY, MELISSA; WOLFE,  
HERBERT; Eastman, Alexander;  
EVANS, MARIEFRED;  
jwleduc@utmb.edu; Johnson, Robert  
(OS/ASPR/BARDA); Yeskey, Kevin;  
Disbrow, Gary (OS/ASPR/BARDA);  
Redd, John (OS/ASPR/SPPR); Hassell,  
David (Chris) (OS/ASPR/IO); Hamel,  
Joseph (OS/ASPR/IO); Hanfling, Dan;  
Wade, David; TARANTINO, DAVID A;  
KAUSHIK, SANGEETA; Lee, Scott  
(OS/ASPR/EMMO); Larry G; Ryan  
Morhard; Steven Jt(tCHFStDPH );  
Adams, Jerome (HHS/OASH); Mansoura,  
Monique K.; Fantinato, Jessica  
(USDA.GOV); DC;  
danny.shiau@usuhs.edu; Cordts, Jerome  
(CTR); Schnitzer, Jay J; Ignacio, Joselito;  
Will Gaskins; CHRISTOPHER ALLEN;  
Kevin Montgomery; Logan, Linda L;  
LLogandakar

**Subject:** RE: Red Dawn Raging Start  
March 4

Oh, I just heart that DC business is closing  
and do tele-work, and no church services.  
Are they not real? And I also heard more  
governors are "banning" large gatherings.  
I thought it's in the news. Are they not? I  
was with a reporter and hence didn't see  
anything. Some reporters wanted to speak  
to me on covid-19 models. I didn't agree  
for a few days but today I have spoken to  
some. Washington post is going to call  
me.

I thought everyone has put on a brake, so  
it's only my imagination? Too bad.

[newton.isye.gatechedu]https://newton.isye.gatech.edu/DrLee/  
[newton.isye.gatech.edu]  
[newton.isye.gatech.edu]

mobile:

Sent with ProtonMail [protonmail.com]  
Secure Email.

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Carter Mecher \_\_\_\_\_  
wrote:

We haven't applied the brakes. We took it off cruise control and that is about it.

Sent from Mail [go.microsoft.com]  
for Windows 10

**From:** Dr. Eva K Lee

**Sent:** Thursday, March 12, 2020  
12:45 PM

**To:** Carter Mecher

**Cc:** Lawler, James V; Tom Bossert; Parker Jr, Gerald W; Richard Hatchett; Gruber,David (DSHS); Dr. Eva Lee; McDonald, Eric; Borio, Luciana; Brian Benson; Tracey McNamara; Duane Caneva; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON; Dodgen, Daniel(OS/ASPR/SPPR); DeBord,Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary

---

(OS/ASPR/BARDA); Redd, John  
(OS/ASPR/SPPR); Hassell, David  
(Chris) (OS/ASPR/IO); Hamel,  
Joseph (OS/ASPR/IO); Hanfling,  
Dan; Wade, David; TARANTINO,  
DAVID A; KAUSHIK,  
SANGEETA; Lee, Scott  
(OS/ASPR/EMMO); Larry G; Ryan  
Morhard; Steven Jt(tCHFStDPH );  
Adams, Jerome (HHS/OASH);  
Mansoura, Monique K.; Fantinato,  
Jessica (USDA.GOV); DC;  
danny.shiau@usuhs.edu; Cordts,  
Jerome (CTR); Schnitzer, Jay J;  
Ignacio, Joselito; Will Gaskins;  
CHRISTOPHER ALLEN; Kevin  
Montgomery; Logan, Linda L;  
LLogandakar

**Subject:** RE: Red Dawn Raging  
Start March 4

yes the brake is on, and that's all  
good. Healthcare providers are  
ciritcal to protect them.. We must  
because those resources are  
precious and we will need all of  
them as we see more severe cases  
But if all brakes are on, we can slow  
down the infection so we can  
address the hospital issues.

[urldefensecom]  
[newton.isye.gatech.edu]https://new  
ton.isye.gatech.edu/DrLee/  
[newton.isye.gatech.edu]  
[newton.isye.gatech.edu]

mobile:

# Original Manusage

On Thursday, March 12, 2020  
10:14 AM, Carter Mecher wrote:

Good news.

Princess Cruises says it is pausing all operations for 2 months after two of their ships were at the center of coronavirus outbreaks.

I have six kids. My youngest is a senior at UGA. He is home on spring break and UGA announced that school will remain closed until at least April 8<sup>th</sup>.

My sense is that colleges and universities across the US will be closing down since they do not present the same issues as K-12 (school meals and adult absenteeism related to child minding). There are 19M colleges students in the US—so an important piece. Then add in the employees and staff at colleges who now are working in an effectively socially-distanced workplace. There are nearly 60M kids attending K-12. 17M of those are home schooled (so they are already taken care of). We are having conversations with the private schools (5.8M students). The private schools seem much more amenable to closure and are already doing so. There are 50.6 M kids attending public school K-12. We are shrinking the problem. Has anyone in public health asked a simple question? If you look at state and local government employees, the majority work for education. Any idea what % are high risk (age>60)? We looked in VA with 400K employees (17% of our employee are age>60). A significantly higher % of our physicians are >60.

[go.microsoft.com] for  
Windows 10

**From:** Carter Mecher

---

**Sent:** Thursday, March 12,  
2020 9:02 AM

**To:** Lawler, James V; Tom  
Bossert; Parker Jr, Gerald W

**Cc:** Richard Hatchett; Dr.  
Eva K Lee; Gruber,David  
(DSHS); Dr. Eva Lee;  
McDonald, Eric; Borio,  
Luciana; Brian Benson;  
Tracey McNamara; Duane  
Caneva; Baric, Ralph S;  
Mecher, Carter (VA.GOV);  
Hunt, Richard  
(OS/ASPR/EMMO);  
WILKINSON, THOMAS;  
M.D.; David; Charity  
A@CDPH; Gregory J;  
Walters, William  
(STATE.GOV);  
HAMILTON, CAMERON;

Dodgen, Daniel  
(OS/ASPR/SPPR);  
DeBord,Kristin  
(OS/ASPR/SPPR); Phillips,  
Sally (OS/ASPR/SPPR);  
Matthew J CIV USARMY  
(USA); Lisa Koonin;  
HARVEY, MELISSA;  
WOLFE, HERBERT;  
Eastman, Alexander;  
EVANS, MARIEFRED;  
jwleduc@utmb.edu; Johnson,  
Robert (OS/ASPR/BARDA);  
Yeskey, Kevin; Disbrow,  
Gary (OS/ASPR/BARDA);  
Redd, John  
(OS/ASPR/SPPR); Hassell,  
David (Chris) (OS/ASPR/IO);  
Hamel, Joseph  
(OS/ASPR/IO); Hanfling,  
Dan; Wade, David;  
TARANTINO, DAVID A;



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KAUSHIK, SANGEETA;  
Lee, Scott  
(OS/ASPR/EMMO); Larry  
G; Ryan Morhard; Steven  
Jt(tCHFStDPH ); Adams,  
Jerome (HHS/OASH);  
Mansoura, Monique K.;  
Fantinato, Jessica  
(USDA.GOV); DC;  
danny.shiau@usuhs.edu;  
Cordts, Jerome (CTR);  
Schnitzer, Jay J; Ignacio,  
Joselito; Will Gaskins;  
CHRISTOPHER ALLEN;  
Kevin Montgomery; Logan,  
Linda L; LLogandakar

**Subject:** RE: Red Dawn  
Raging Start March 4

Attached is the household  
data. Would ask others to  
review to doublecheck.

Sent from Mail  
[go.microsoft.com] for  
Windows 10

---

**From:** Carter Mecher

**Sent:** Thursday, March 12,  
2020 8:58 AM

**To:** Lawler, James V; Tom  
Bossert; Parker Jr, Gerald W

**Cc:** Richard Hatchett; Dr.  
Eva K Lee; Gruber,David  
(DSHS); Dr. Eva Lee;  
McDonald, Eric; Borio,  
Luciana; Brian Benson;

---

Tracey McNamara; Duane  
Caneva; Baric, Ralph S;  
Mecher, Carter (VA.GOV);  
Hunt, Richard  
(OS/ASPR/EMMO);  
WILKINSON, THOMAS;  
M.D.; David; Charity  
A@CDPH; Gregory J;  
Walters, William  
(STATE.GOV);  
HAMILTON, CAMERON;

Dodgen, Daniel  
(OS/ASPR/SPPR);  
DeBord, Kristin  
(OS/ASPR/SPPR); Phillips,  
Sally (OS/ASPR/SPPR);  
Matthew J CIV USARMY  
(USA); Lisa Koonin;  
HARVEY, MELISSA;  
WOLFE, HERBERT;  
Eastman, Alexander;  
EVANS, MARIEFRED;  
jwleduc@utmb.edu; Johnson,  
Robert (OS/ASPR/BARDA);  
Yeskey, Kevin; Disbrow,  
Gary (OS/ASPR/BARDA);  
Redd, John  
(OS/ASPR/SPPR); Hassell,  
David (Chris) (OS/ASPR/IO);  
Hamel, Joseph  
(OS/ASPR/IO); Hanfling,  
Dan; Wade, David;  
TARANTINO, DAVID A;  
KAUSHIK, SANGEETA;  
Lee, Scott  
(OS/ASPR/EMMO); Larry  
G; Ryan Morhard; Steven  
Jt(tCHFStDPH ); Adams,  
Jerome (HHS/OASH);  
Mansoura, Monique K.;  
Fantinato, Jessica  
(USDA.GOV); DC;  
danny.shiau@usuhs.edu;  
Cordts, Jerome (CTR);  
Schnitzer, Jay J; Ignacio,  
Joselito; Will Gaskins;  
CHRISTOPHER ALLEN;  
Kevin Montgomery; Logan,  
Linda L; LLogandakar

**Subject:** RE: Red Dawn  
Raging Start March 4

I put all my thoughts together for the defense of school closure. A little long, but I am sharing so that the opponents of school closure understand the arguments they will face if they do not act and it turns out they were terribly wrong.

One statistic that really stuck me as I looked thru the American Survey Data. There are 120 M households in the US. Only 1% of the households in the United States have children and a senior adult present (1.27 M households)

Sent from [Mail](#)  
[\[go.microsoft.com\]](#) for  
Windows 10

---

**From:** [Lawler, James V](#)

**Sent:** Thursday, March 12,  
2020 7:34 AM

**To:** [Tom Bossert](#); [Parker Jr,](#)  
[Gerald W](#)

**Cc:** [Richard Hatchett](#); [Carter](#)  
[Mecher](#); [Dr. Eva K Lee](#);  
[Gruber,David \(DSHS\)](#); [Dr.](#)  
[Eva Lee](#); [McDonald, Eric](#);

---

Borio, Luciana; Brian Benson; Tracey McNamara; Duane Caneva; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J. Walters, William (STATE.GOV); HAMILTON, CAMERON;

Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Hanfling, Dan; Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH ); Adams, Jerome (HHS/OASH); Mansoura, Monique K.; Fantinato, Jessica (USDA.GOV); DC; danny.shiau@usuhs.edu; Cordts, Jerome (CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; CHRISTOPHER ALLEN; Kevin Montgomery; Logan, Linda L; LLogandakar

**Subject:** Re: Red Dawn  
Raging Start March 4

Like it Tom. The message is :  
let's be Singapore and Hong  
Kong, not Italy. And given  
the current state of our public  
health infrastructure we need  
to implement all NPI in  
affected communities

James Lawler, MD, MPH,  
FIDSA

Director, International  
Programs & Innovation

Global Center for Health  
Security, and

Associate Professor of  
Medicine

Division of Infectious  
Diseases

University of Nebraska  
Medical Center

m:

[james.lawler@unmc.edu](mailto:james.lawler@unmc.edu)

**From:** Tom Bossert

**Sent:** Thursday, March 12,  
2020 2:08:34 PM

**To:** Parker Jr, Gerald W  
<[gparker@cvm.tamu.edu](mailto:gparker@cvm.tamu.edu)>

**Cc:** Richard Hatchett

<richard.hatchett@cepi.net>;  
Carter Mecher  
Dr.  
Eva K Lee <evalee-  
Gruber,David (DSHS)  
<David.Grubert@dshs.texas.gov>; Dr. Eva Lee  
<eva.evalee.lee64@gmail.com>; McDonald, Eric  
<Eric.McDonald@sdcountry.ca.gov>; Borio, Luciana  
<LBorio@iqt.org>; Brian  
Benson  
<brian.  
Lawler, James V  
<james.lawler@unmc.edu>;  
Tracey McNamara  
<tmcNamara@westernu.edu>  
>; Duane Caneva  
<duane.caneva@hq.dhs.gov>;  
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<rbaric@email.unc.edu>;  
Mecher, Carter (VA.GOV  
[va.gov])  
<carter.mecher@va.gov>;  
Hunt, Richard  
(OS/ASPR/EMMO)  
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WILKINSON, THOMAS  
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<DMarcozzi@som.umaryland.edu>; Charity A@CDPH  
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Dodgen, Daniel  
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Phillips, Sally  
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Matthew J CIV USARMY

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<[melissa.harvey@hq.dhs.gov](mailto:melissa.harvey@hq.dhs.gov)>; WOLFE, HERBERT  
<[HERBERT.WOLFE@hq.dhs.gov](mailto:HERBERT.WOLFE@hq.dhs.gov)>; Eastman, Alexander  
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<[Gary.Disbrow@hhs.gov](mailto:Gary.Disbrow@hhs.gov)>; Redd, John  
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<[david.a.tarantino@cbpdhs.gov](mailto:david.a.tarantino@cbpdhs.gov)>; KAUSHIK, SANGEETA  
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(OS/ASPR/EMMO)  
<[Scott.Lee@hhs.gov](mailto:Scott.Lee@hhs.gov)>; Larry G <[PadgetLG@state.gov](mailto:PadgetLG@state.gov)>; Ryan Morhard  
<[Ryan.Morhard@weforum.org](mailto:Ryan.Morhard@weforum.org)>; Steven Jt(tCHFStDPH )  
<[steven.stack@ky.gov](mailto:steven.stack@ky.gov)>; Adams, Jerome  
(HHS/OASH)  
<[Jerome.Adams@hhs.gov](mailto:Jerome.Adams@hhs.gov)>; Mansoura, Monique K.  
<[mmansoura@mitre.org](mailto:mmansoura@mitre.org)>; Fantinato, Jessica

(USDA.GOV [usda.gov])  
<jessica.fantinato@usda.gov>  
; DC  
<michelle.colby@usda.gov>;  
danny.shiau@usuhs.edu  
<danny.shiau@usuhs.edu>;  
Cordts, Jerome (CTR)  
<jerome.cordts@associates.h  
q.dhs.gov>; Schnitzer, Jay J  
<jschnitzer@mitre.org>;  
Ignacio, Joselito  
<joselito.ignacio@fema.dhs.g  
ov>; Will Gaskins  
<will.gaskins@efia.com>;  
CHRISTOPHER ALLEN

Kevin Montgomery  
<kevin@collaborate.org>;  
Logan, Linda L  
<llogan@cvm.tamu.edu>;  
LLogandakar

**Subject:** Re: Red Dawn  
Raging Start March 4

Non-UNMC email

We are making great  
progress. My message today  
on US TV will be as follows:

- The biggest  
misunderstanding about  
#coronavirus interventions is  
they are an à la carte menu of  
options to be selectively  
implemented. This is dead  
wrong. They ALL must be  
implemented to achieve a  
layered effect. Removing any  
one can defeat all. For  
instance, close schools AND  
cancel events.

- There's little value to



European travel restrictions.  
Poor use of time & energy.  
Earlier, yes. Now, travel  
restrictions and screening are  
less useful We have nearly as  
much disease here in the US  
as the countries in Europe.  
We MUST focus on layered  
community mitigation  
measures-Now!

-Tom

On Mar 12, 2020, at  
12:44 AM, Parker Jr,  
Gerald W  
<[gparker@cvm.tamu.edu](mailto:gparker@cvm.tamu.edu)>  
wrote:

Richard, I will use it  
tomorrow. Thanks!

Get [Outlook for iOS](#)

**From:** Richard  
Hatchett  
<[richardhatchett@cepi.net](mailto:richardhatchett@cepi.net)>

**Sent:** Wednesday,  
March 11, 2020 23:41

**To:** Parker Jr, Gerald  
W

**Cc:** Tom Bossert;  
Carter Mecher; Dr. Eva  
K Lee; Gruber,David  
(DSHS); Dr. Eva Lee;  
McDonald, Eric; Borio,  
Luciana; Brian Benson;  
Lawler, James V;  
Tracey McNamara;  
Duane Caneva; Baric,  
Ralph S; Mecher,  
Carter ([VA.GOV](mailto:VA.GOV@va.gov)  
[\[va.gov\]](mailto:va.gov)); Hunt,  
Richard  
(OS/ASPR/EMMO);  
WILKINSON,  
THOMAS; M.D.;  
David; Charity  
A@CDPH; Gregory J;  
Walters, William  
([STATE.GOV](mailto:STATE.GOV@state.gov)  
[\[state.gov\]](mailto:state.gov));  
HAMILTON,  
CAMERON;

Dodgen, Daniel  
(OS/ASPR/SPPR);  
DeBord,Kristin  
(OS/ASPR/SPPR);  
Phillips, Sally  
(OS/ASPR/SPPR);  
Matthew J CIV  
USARMY (USA); Lisa  
Koonin; HARVEY,  
MELISSA; WOLFE,  
HERBERT; Eastman,  
Alexander; EVANS,  
MARIEFRED;  
[jwleduc@utmb.edu](mailto:jwleduc@utmb.edu);  
Johnson, Robert  
(OS/ASPR/BARDA);  
Yeskey, Kevin;  
Disbrow, Gary  
(OS/ASPR/BARDA);  
Redd, John  
(OS/ASPR/SPPR);  
Hassell, David (Chris)  
(OS/ASPR/IO); Hamel,  
Joseph (OS/ASPR/IO);  
Hanfling, Dan; Wade,  
David; TARANTINO,  
DAVID A; KAUSHIK,  
SANGEETA; Lee,  
Scott  
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Larry G; Ryan  
Morhard; Steven

Jt(tCHFStDPH );  
Adams, Jerome  
(HHS/OASH);  
Mansoura, Monique  
K.; Fantinato, Jessica  
([USDA.GOV](mailto:USDA.GOV@usda.gov)  
[\[usda.gov\]](mailto:usda.gov)); DC;  
[danny.shiau@usuhs.edu](mailto:danny.shiau@usuhs.edu)  
; Cordts, Jerome  
(CTR); Schnitzer, Jay  
J; Ignacio, Joselito;  
Will Gaskins;  
CHRISTOPHER  
ALLEN; Kevin  
Montgomery; Logan,  
Linda L; LLogandakar

**Subject:** Re: Red  
Dawn Raging Start  
March 4

“our communities” and  
“eyewall” - I hate  
autocorrect

It is good - people need  
to have analogies they  
can relate to. They  
also need analogies that  
motivate action and  
help them understand  
that THEY must take  
action. Government  
won't save you from a  
Cat 5 storm, but  
through our actions we  
can prevent it from  
being that. The virus is  
coming to your  
community but what it  
does is up to us.

Sent from my iPhone

On 12 Mar 2020,  
at 04:34, Parker  
Jr, Gerald W  
<[gparker@cvm.tamu.edu](mailto:gparker@cvm.tamu.edu)> wrote:

Richard, thanks.  
I am trying to  
think of  
something that  
Texans can  
understand. You  
would not  
believe the vitriol  
locally in the  
Houston area  
now that the  
Houston Rodeo  
was cancelled. It  
was a  
courageous but  
correct decision.  
I have an  
interview with  
Houston  
Chronicle  
tomorrow and  
may use that  
analogy. I will  
also strongly  
support that local  
decision.

Get [Outlook for  
iOS](#)

**From:** Richard  
Hatchett  
<[richard.hatchett](mailto:richard.hatchett)>

**Sent:**  
Wednesday,  
March 11, 2020  
11:27 PM

**To:** Parker Jr,  
Gerald W

**Cc:** Tom  
Bossert; Carter  
Mecher; Dr. Eva  
K Lee;  
Gruber,David  
(DSHS); Dr. Eva  
Lee; McDonald,  
Eric; Borio,  
Luciana; Brian  
Benson; Lawler,  
James V; Tracey  
McNamara;  
Duane Caneva;  
Baric, Ralph S;  
Mecher, Carter  
([VA.GOV](mailto:VA.GOV)  
[va.gov](mailto:va.gov)); Hunt,  
Richard  
(OS/ASPR/EM  
MO);  
WILKINSON,  
THOMAS;  
M.D.; David;  
Charity  
A@CDPH;  
Gregory J;  
Walters, William  
([STATE.GOV](mailto:STATE.GOV)  
[state.gov](mailto:state.gov));  
HAMILTON,  
CAMERON;  
[rjglassjr@gmail.c](mailto:rjglassjr@gmail.com)  
[om](mailto:om); Dodgen,  
Daniel  
(OS/ASPR/SPPR  
); DeBord,Kristin  
(OS/ASPR/SPPR  
); Phillips, Sally  
(OS/ASPR/SPPR  
); Matthew J  
CIV USARMY  
(USA); Lisa  
Koonin;

HARVEY,  
MELISSA;  
WOLFE,  
HERBERT;  
Eastman,  
Alexander;  
EVANS,  
MARIEFRED;  
[jwleduc@utmb.edu](mailto:jwleduc@utmb.edu);  
Johnson,  
Robert  
(OS/ASPR/BAR  
DA); Yeskey,  
Kevin; Disbrow,  
Gary  
(OS/ASPR/BAR  
DA); Redd, John  
(OS/ASPR/SPPR  
); Hassell, David  
(Chris)  
(OS/ASPR/IO);  
Hamel, Joseph  
(OS/ASPR/IO);  
Hanfling, Dan;  
Wade, David;  
TARANTINO,  
DAVID A;  
KAUSHIK,  
SANGEETA;  
Lee, Scott  
(OS/ASPR/EM  
MO); Larry G;  
Ryan Morhard;  
Steven  
Jt(tCHFStDPH );  
Adams, Jerome  
(HHS/OASH);  
Mansoura,  
Monique K.;  
Fantinato, Jessica  
([USDA.GOV](mailto:USDA.GOV)  
[usda.gov](mailto:usda.gov)]); DC;  
[danny.shiau@usuhhs.edu](mailto:danny.shiau@usuhhs.edu); Cordts,  
Jerome (CTR);  
Schnitzer, Jay J;  
Ignacio, Joselito;  
Will Gaskins;  
CHRISTOPHER  
ALLEN; Kevin  
Montgomery;  
Logan, Linda L;  
LLogandakar

**Subject:** Re:

Red Dawn  
Raging Start  
March 4

Gerry - I thought yesterday about the incoming hurricane analogy as well and think it is a good one. This is a Cat 5 threat to safety that is coming too Jr. communities and fast, and we can either prepare and do the epidemic equivalent of evacuate to safer ground (i.e., TLC/CMG) or take our chances. It's a lot harder to evacuate when the winds are above 100 miles an hour on their way up to 190 at the eyeball.

Sent from my  
iPhone

On 12 Mar  
2020, at  
04:16,  
Parker Jr,  
Gerald W  
<[gparker@cvm.tamu.edu](mailto:gparker@cvm.tamu.edu)>  
wrote:

I do not

see it. No  
use now. I  
saw it for  
China.  
But not  
now. We  
should  
focus on  
targeted,  
layered  
community  
mitigation  
measures.  
Maybe we  
could use a  
hurricane  
analogy  
that many  
understand

.  
COVID19  
is like a  
storm  
coming to  
our  
communiti  
es, but  
rather than  
evacuation  
or shelter  
in place  
orders, the  
analogous  
move is  
community  
mitigation.

At this  
stage they  
must be  
aggressive  
because  
we do not  
have the  
time  
luxury of a  
hurricane  
in the  
Atlantic.



**From:**  
Tom  
Bossert  
<[tom.bossert@me.com](mailto:tom.bossert@me.com)>

**Sent:**  
Wednesday,  
March  
11, 2020  
23:05

**To:** Carter  
Mecher

**Cc:** Dr.  
Eva K Lee;  
Richard  
Hatchett;  
Gruber, David  
(DSHS);  
Dr. Eva  
Lee;  
McDonald,  
Eric;  
Borio,  
Luciana;  
Brian  
Benson;  
Lawler,  
James V;  
Tracey  
McNamara  
; Duane  
Caneva;  
Baric,  
Ralph S;  
Mecher,  
Carter  
([VAGOV@va.gov](mailto:VAGOV@va.gov));  
Hunt,  
Richard  
(OS/ASPR  
/EMMO);  
WILKINS

ON,  
THOMAS;  
M.D.;  
David;  
Charity  
A@CDPH  
; Gregory  
J; Walters,  
William  
(STATE.G  
OV  
[state.gov]  
);  
HAMILT  
ON,  
CAMERO  
N;  
rjglassjr@  
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Dodgen,  
Daniel  
(OS/ASPR  
/SPPR);  
DeBord,Kr  
istin  
(OS/ASPR  
/SPPR);  
Phillips,  
Sally  
(OS/ASPR  
/SPPR);  
Matthew J  
CIV  
USARMY  
(USA);  
Lisa  
Koonin;  
HARVEY,  
MELISSA  
; WOLFE,  
HERBER  
T;  
Eastman,  
Alexander;  
EVANS,  
MARIEFR  
ED;  
jwleduc@u  
tmb.edu;  
Johnson,  
Robert  
(OS/ASPR  
/BARDA);  
Yeskey,  
Kevin;  
Disbrow,

Gary  
(OS/ASPR  
/BARDA);  
Redd, John  
(OS/ASPR  
/SPPR);  
Hassell,  
David  
(Chris)  
(OS/ASPR  
/IO);  
Hamel,  
Joseph  
(OS/ASPR  
/IO);  
Hanfling,  
Dan;  
Wade,  
David;  
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(OS/ASPR  
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Larry G;  
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Morhard;  
Steven  
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Adams,  
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Mansoura,  
Monique  
K.;  
Fantinato,  
Jessica  
(USDA.G  
OV  
[usda.gov]  
); DC;  
danny.shia  
u@usuhs.e  
du; Cordts,  
Jerome  
(CTR);  
Schnitzer,  
Jay J;  
Ignacio,

Joselito;  
Will  
Gaskins;  
CHRISTO  
PHER  
ALLEN;  
Kevin  
Montgome  
ry; Parker  
Jr, Gerald  
W; Logan,  
Linda L;  
LLoganda  
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**Subject:**  
Re: Red  
Dawn  
Raging  
Start  
March 4

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anyone  
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y?  
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it, but I'm  
hoping  
there is  
something  
I don't  
know.

-Tom

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Comparison of France, Spain, UK, Germany, US and Italy.

Added in the population and dates of first case and first death.

The US is about 2 days behind France and Spain. France and Spain are about 8-9

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Sent from [Mail](#) for Windows 10

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**From:** [Tom Bossert](#)

**Sent:** Wednesday, March 11, 2020 10:05 PM

**To:** [Dr. Eva K Lee](#)

**Cc:** [Richard Hatchett](#); [Gruber, David \(DSHS\)](#); [Dr. Eva Lee](#); [McDonald, Eric](#); [Borio, Luciana](#); [Brian Benson](#); [Lawler, James V](#); [Tracey McNamara](#); [Duane Caneva](#); [Baric, Ralph S](#); [Mecher, Carter \(VA.GOV\)](#); [Hunt, Richard \(OS/ASPR/EMMO\)](#); [WILKINSON, THOMAS; M.D.](#); [David; Charity A@CDPH](#); [Gregory J; Walters, William \(STATE.GOV\)](#); [HAMILTON, CAMERON](#); [Dodgen, Daniel \(OS/ASPR/SPPR\)](#); [DeBord, Kristin \(OS/ASPR/SPPR\)](#); [Phillips, Sally \(OS/ASPR/SPPR\)](#); [Matthew J CIV USARMY \(USA\)](#); [Lisa Koonin](#); [HARVEY, MELISSA](#);

WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmbedu; Johnson, Robert  
(OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David  
(Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Hanfling, Dan; Wade, David; TARANTINO, DAVID A; KAUSHIK,  
SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH ); Adams, Jerome  
(HHS/OASH); Mansoura, Monique K.; Fantinato, Jessica (USDA.GOV); DC; danny.shiau@usuhsedu; Cordts, Jerome  
(CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; CHRISTOPHER ALLEN; Kevin Montgomery; Parker Jr, Gerald W;  
Logan, Linda L; LLogandakar

**Subject:** Re: Red Dawn Raging Start March 4

Well, I give the president credit for changing his tone and making Americans know this is very serious. By all other metrics, it was a combination of gibberish, unnecessary steps, and insufficient detail. We still have a lot of work ahead of us team.

-Tom

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Sent from [Mail](#) for Windows 10

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**From:** [Carter Mecher](#)

**Sent:** Tuesday, March 10, 2020 10:30 AM

**To:** [Gruber,David \(DSHS\)](#); [Dr. Eva Lee](#); [McDonald, Eric](#)

**Cc:** [Borio, Luciana](#); [Brian Benson](#); [Lawler, James V](#); [Tracey McNamara](#); [Duane Caneva](#); [Dr. Eva K Lee](#); [Tom Bossert](#); [Baric, Ralph S](#); [Mecher, Carter \(VA.GOV\)](#); [Hunt, Richard \(OS/ASPR/EMMO\)](#); [Richard Hatchett](#); [WILKINSON, THOMAS, M.D.](#); [David](#); [Charity A@CDPH](#); [Gregory J](#); [Walters, William \(STATE.GOV\)](#); [HAMILTON, CAMERON](#); [Dodgen, Daniel \(OS/ASPR/SPPR\)](#); [DeBord, Kristin \(OS/ASPR/SPPR\)](#); [Phillips, Sally \(OS/ASPR/SPPR\)](#); [Matthew J CIV USARMY \(USA\)](#); [Lisa Koonin](#); [HARVEY, MELISSA](#); [WOLFE, HERBERT](#); [Eastman, Alexander](#); [EVANS, MARIEFRED](#); [jwleduc@utmb.edu](#); [Johnson, Robert \(OS/ASPR/BARDA\)](#); [Yeskey, Kevin](#); [Disbrow, Gary \(OS/ASPR/BARDA\)](#); [Redd, John \(OS/ASPR/SPPR\)](#); [Hassell, David \(Chris\) \(OS/ASPR/IO\)](#); [Hamel, Joseph \(OS/ASPR/IO\)](#); [Hanfling, Dan](#); [Wade, David](#); [TARANTINO, DAVID A](#); [KAUSHIK, SANGEETA](#); [Lee, Scott \(OS/ASPR/EMMO\)](#); [Larry G](#); [Ryan Morhard](#); [Steven Jt\(tCHFStDPH \)](#); [Adams, Jerome \(HHS/OASH\)](#); [Mansoura, Monique K.](#); [Fantinato, Jessica \(USDA.GOV\)](#); [DC](#); [danny.shiau@usuhs.edu](#); [Cordts, Jerome \(CTR\)](#); [Schnitzer, Jay J](#); [Ignacio, Joselito](#); [Will Gaskins](#); [CHRISTOPHER ALLEN](#); [Kevin Montgomery](#); [Parker Jr, Gerald W](#); [Logan, Linda L](#); [LLogandakar](#)

**Subject:** RE: Red Dawn Raging Start March 4

Back in 2007, there was modeling for estimating the economic impact of a pandemic (unmitigated with no NPIs) and a mitigated pandemic plus the costs of NPIs. I can see if I can dig that up. The bottom line is that when you add in the cost associated with lives lost in an unmitigated pandemic, additional healthcare costs due to greater numbers of those who are ill and hospitalized, economic costs due to lost productivity due to increased illness, the NPI costs pale in comparison I will see what additional info I can find to help you.

I'm listening to the arguments for not closing schools: (1) kids may not be important in disease transmission and when kids do become infected, their illness is mild; (2) closing schools is too disruptive, it will require parents to stay home from work to mind their children (and this absenteeism could adversely impact critical sectors such as healthcare); (3) large number of kids depend upon school meals and the closure of schools could have serious consequences; (4) by keeping kids home, they have more time to be around older adults in the household and potentially transmit disease to more vulnerable groups (the thinking is that it would be safer to keep them at school for at least 8 hrs of the day to decrease contact time with older adults in the household); and (5) kids will just mix again the community (that kids will "hang out at malls").

Just something to think about.

Schools are closing now for 1 week for spring break (many this week and some in the next week or two). This is happening at a critical point of the acceleration of this outbreak in the US. In the next couple of weeks our healthcare system is likely to be stressed. A good number of parents take time off over spring break to be with their kids (many times both parents for two parent households). Below is a graph of annual leave usage rates in VA It is very consistent from year to year (looks a lot like an EKG tracing. You see a spike at Thanksgiving, another huge spike round Christmas/New Years, another small bump in the spring (spring break), and another broad bump (that looks like a T wave on an EKG) in the summer months when families tend to take vacations (because kids are out of school).

Given the argument of those opposed to closing schools, should we cancel spring break and keep the schools open so that parents don't have to stay home to mind their kids at this particularly vulnerable time when our healthcare system is about to be hammered? Should we also keep the schools open so that kids are kept away from older adults in the household for much of the day during this period of acceleration? That is pretty much the extension of illogical logic.

We close schools for 1 week for spring break and the world does not fall apart. The nutrition of children does not suffer. Do we think if schools closed for two weeks, that the world would come crashing down? Why not close for two weeks and then reassess (at least it gives us time). We can never get that time back.

Last thing. Many of you have kids, do any of them hang out at malls? In my neighborhood I don't even see kids outside—they are all inside texting, on Instagram, playing games with their friends online or whatever they do these days. Hardly see them riding their bikes around. I understand that “going to the mall” is code for kids re-congregating outside of school. Even if they do they are in a less socially dense environment and in much smaller groups. The whole school doesn't all go together anywhere, except to school.

Sent from Mail for Windows 10

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**From:** Gruber, David (DSHS)

**Sent:** Tuesday, March 10, 2020 9:58 AM

**To:** Dr. Eva Lee; McDonald, Eric

**Cc:** Carter Mecher; Borio, Luciana; Brian Benson; Lawler, James V; Tracey McNamara; Duane Caneva; Dr. Eva K Lee; Tom Bossert; Baric, Ralph S; Mecher, Carter (VA.GOV); Hunt, Richard (OS/ASPR/EMMO); Richard Hatchett; WILKINSON, THOMAS; M.D.; David; Charity A@CDPH; Gregory J; Walters, William (STATE.GOV); HAMILTON, CAMERON; Dodgen, Daniel (OS/ASPR/SPPR); DeBord, Kristin (OS/ASPR/SPPR); Phillips, Sally (OS/ASPR/SPPR); Matthew J CIV USARMY (USA); Lisa Koonin; HARVEY, MELISSA; WOLFE, HERBERT; Eastman, Alexander; EVANS, MARIEFRED; jwleduc@utmb.edu; Johnson, Robert (OS/ASPR/BARDA); Yeskey, Kevin; Disbrow, Gary (OS/ASPR/BARDA); Redd, John (OS/ASPR/SPPR); Hassell, David (Chris) (OS/ASPR/IO); Hamel, Joseph (OS/ASPR/IO); Hanfling, Dan; Wade, David; TARANTINO, DAVID A; KAUSHIK, SANGEETA; Lee, Scott (OS/ASPR/EMMO); Larry G; Ryan Morhard; Steven Jt(tCHFStDPH ); Adams, Jerome (HHS/OASH); Mansoura, Monique K.; Fantinato, Jessica (USDA.GOV); DC; danny.shiau@usuhs.edu; Cordts, Jerome (CTR); Schnitzer, Jay J; Ignacio, Joselito; Will Gaskins; CHRISTOPHER ALLEN; Kevin Montgomery; Parker Jr, Gerald W; Logan, Linda L; LLogandakar

**Subject:** RE: Red Dawn Raging Start March 4

As a state public health official who is in agreement that NPIs must be strongly enacted early; I'm looking for help from this group to find tools that make the case for NPIs. The target audience is those outside of health.

I'm attaching an example slide (admittedly and intentionally rudimentary) that might be used to support this argument and explain the totality of NPIs. Do others see this as something that might aid in influencing and, if so, are there data sources that I might tap into showing the impacts of NPIs directly on epi curves and how these NPIs would impact other community foundations?

Thanks  
Dave

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**From:** Dr. Eva Lee <[eva.evalee.lee64@gmail.com](mailto:eva.evalee.lee64@gmail.com)>

**Sent:** Saturday, March 7, 2020 8:53 PM

**To:** McDonald, Eric <[Eric.McDonald@sdcountry.ca.gov](mailto:Eric.McDonald@sdcountry.ca.gov)>

**Cc:** Carter Mecher  
Lawler, James V <[james.lawler@unmc.edu](mailto:james.lawler@unmc.edu)>; Tracey McNamara <[tmcNamara@westernu.edu](mailto:tmcNamara@westernu.edu)>; Duane Caneva <[duane.caneva@hq.dhs.gov](mailto:duane.caneva@hq.dhs.gov)>; Dr. Eva K Lee  
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Kevin Montgomery <[kevin@collaborate.org](mailto:kevin@collaborate.org)>; Parker Jr, Gerald W <[gparkers@cvm.tamu.edu](mailto:gparkers@cvm.tamu.edu)>; Logan, Linda L <[llogan@cvm.tamu.edu](mailto:llogan@cvm.tamu.edu)>; LLogandakar

**Subject:** Re: Red Dawn Raging Start March 4

**WARNING:** This email is from outside the HHS system Do not click on links or attachments unless you expect them from the sender and know the content is safe.

I assume the WHO test kit protocol used by other parts of the world won't be used by US (or accepted by FDA/CDC). Yes, we have talked about testing bottleneck since January. Can't say more.

This may be of interest from BBC.

# Coronavirus: Northern Italy to quarantine 16 million people

[bbc.com]<https://www.bbc.com/news/world-middle-east-51787238> [bbc.com]

On Sat, Mar 7, 2020 at 9:30 PM McDonald, Eric <[Eric.McDonald@sdcounty.ca.gov](mailto:Eric.McDonald@sdcounty.ca.gov)> wrote:

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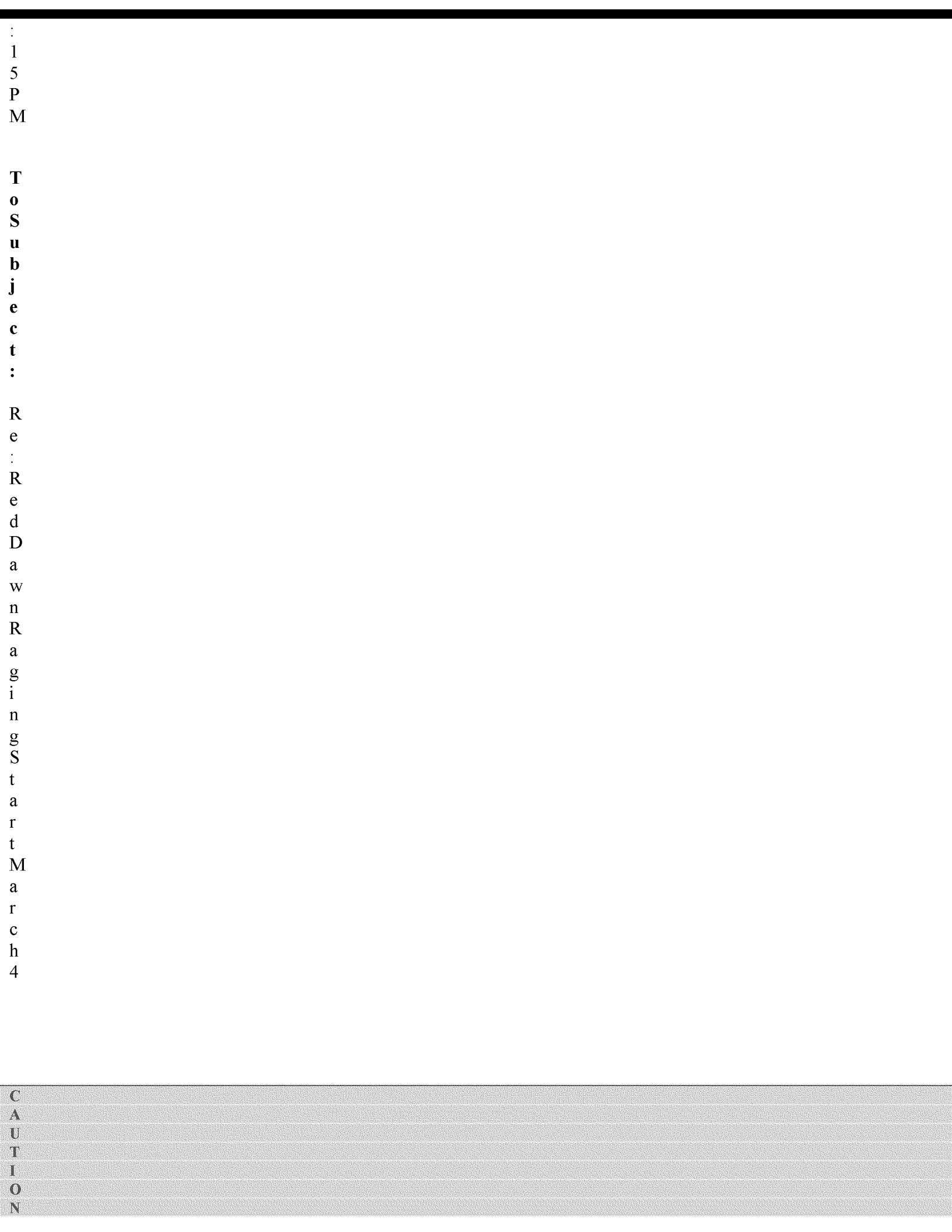
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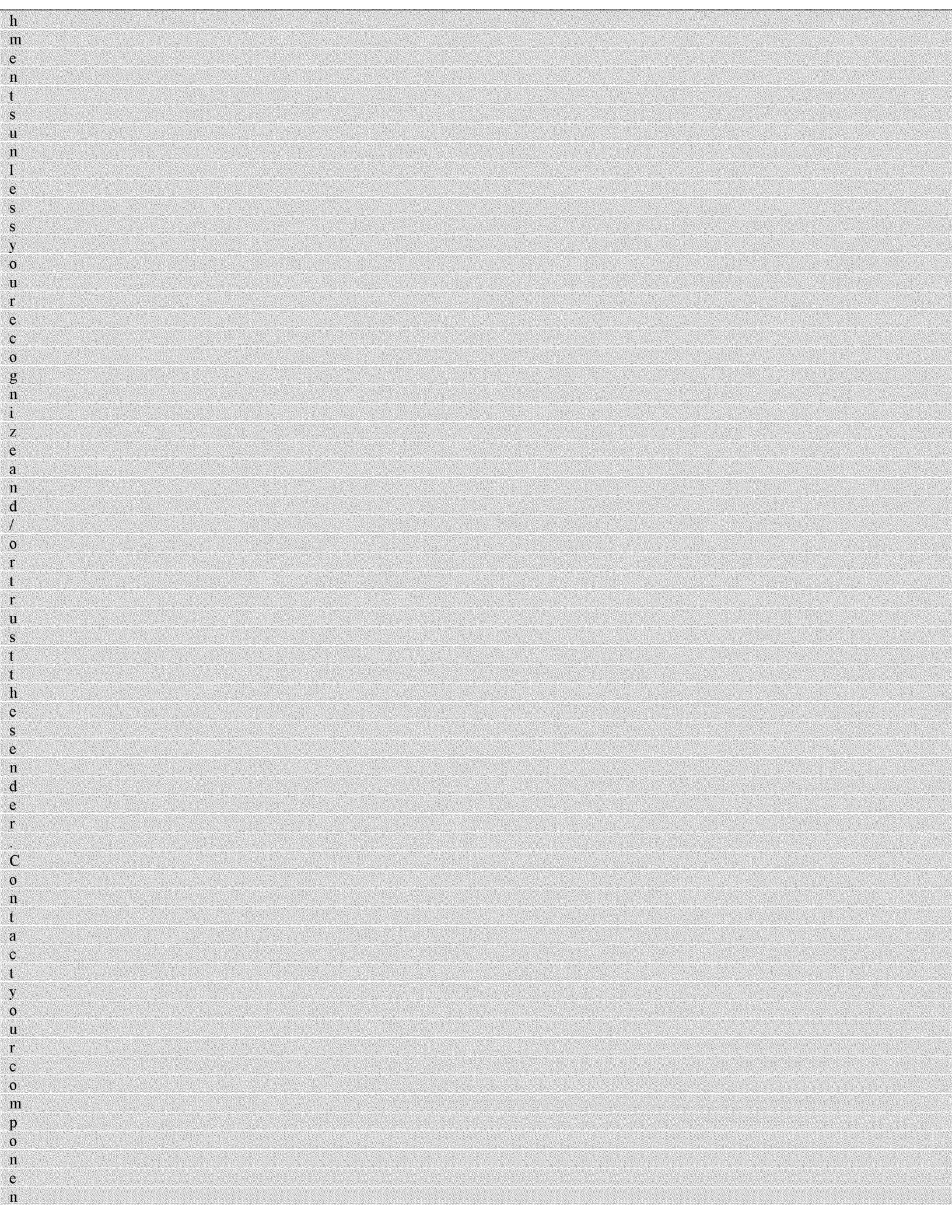
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read this statement about closing schools (we have heard around many of these arguments before)

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attention, then most of these patients (35%-38% of those who were recruited in the field, so 35M-38M) will be

prescribed, home visits  
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about double the number of all primary care visits in the US over a 3 month period. This is a proportion

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from large health care systems on this seminar, how are you planning on getting to scale up to meet the

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Contact your resource component to discuss with the question concerns.

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and avoid identifying social ally dense environments (social distancing). Every person could

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also know that complex systems are exquisitely dependent upon initial conditions and that

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. They have learned what rules seem to of favor the emergence of the pattern  
ns we desire.

When leaders modify their rules (or exclude one altogether) and pull their trigger

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From:  
"Caneva,  
Duanne"

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und to be infected.

A total of 696 people were confirmed med to be infected on the cruise ship,

excluding those who became infected after returning home.

According to the Ministry of

Health, Labor and Welfare, in addition to this is 696 people, there is someone crew member who got

on board after the cruise ship entered the Yoko Hamaport and was confirmed infected. In addition

tion, the Ministry of Health, Labor and Welfare are ahead previous survey annually announced the number of people



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